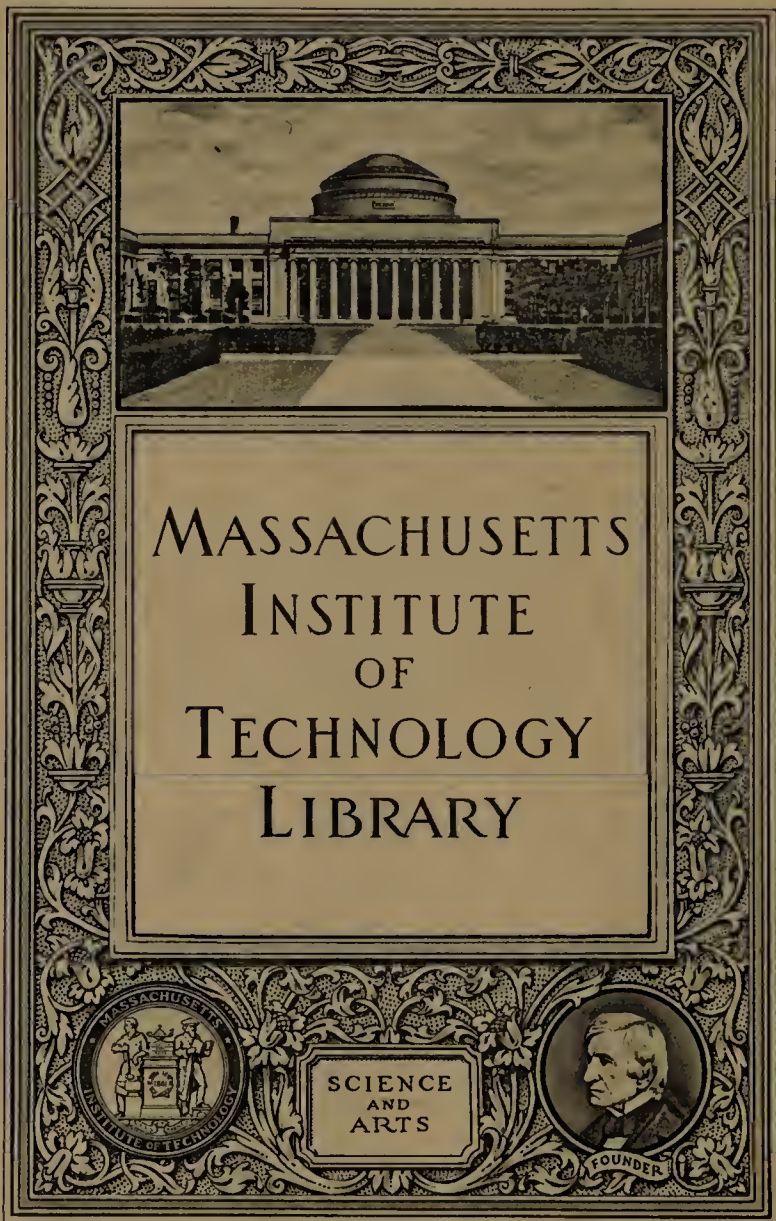


*New York City* *W. H. T. Tracy*

REPORT  
OF THE  
BRONX PARKWAY COMMISSION

1922

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COMPLETED DEVELOPMENT LOOKING TOWARD WOODLAWN

R E P O R T

OF THE

BRONX PARKWAY COMMISSION

ORGANIZED UNDER CHAPTER 594  
OF THE LAWS OF 1907

AMENDED BY CHAPTER 757  
OF THE LAWS OF 1913

AMENDED BY CHAPTER 599  
OF THE LAWS OF 1916

AMENDED BY CHAPTER 604  
OF THE LAWS OF 1922

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TO THE GOVERNOR AND LEGISLATURE  
OF THE STATE OF NEW YORK

THE BOARD OF ESTIMATE AND APPORTIONMENT  
OF THE CITY OF NEW YORK

THE BOARD OF SUPERVISORS  
OF THE COUNTY OF WESTCHESTER

---

DECEMBER 31, 1922





LAKE AT WAKEFIELD

*Materials dredged from this lake filled a swampy area on which the Parkway Drive, at right was built*



## COMMISSIONERS

MADISON GRANT, *President*  
WILLIAM W. NILES, *Vice-President*  
FRANK H. BETHELL, *Treasurer*

---

*Engineer and Secretary*  
JAY DOWNER

*Counsel*  
THEODOSIUS STEVENS

*Deputy Chief Engineer*  
LESLIE G. HOLLERAN

*Consulting Landscape Architect and Forester*  
HERMANN W. MERKEL

---

*Offices*  
342 Madison Ave., N. Y. C.  
and  
Bronxville, New York





BRIDGE BETWEEN HARTSDALE AND WHITE PLAINS

Gilmore D. Clarke, Architect



*To the Governor and Legislature of the State of New York,*

*The Board of Estimate and Apportionment of the City of New York,*

*The Board of Supervisors of Westchester County.*

This report sets forth the present status of the Bronx River Parkway project, now nearing completion. It contains a statement of the cost of finishing the work and recommendations for the transfer of control of the project when finished from this Commission to a permanent maintenance organization.

There have been six preceding reports. These related in detail the necessity for and purposes to be accomplished by this great public improvement and contained a record of the work done prior to January 1, 1919. This record shows:

That in 1907 the Bronx River Parkway Reservation was created by act of the Legislature and Commissioners were appointed by Governor Hughes.

That this law specifically provided that no expense or obligation could be incurred by the Commissioners until the Board of Estimate of the City of New York had approved the taking of the necessary lands.

That after several years of careful investigation and legislation authorizing a reduction of the area, the Board of Estimate approved the project, so that on June 5, 1913 the Commissioners were authorized to proceed with the acquisition of the lands and the clearing up of accumulated filth and pollution, which had turned the river channel into an open sewer.

That 355 buildings, mostly inferior, had been removed and nearly five miles of billboards banished from the Reservation.

That swamps had been drained, garbage dumps abolished, and 154 cases of sewage and stable pollution eliminated.



The Parkway Act had a dual purpose:

*First:*— to reclaim the Bronx River from its intolerable condition as an open sewer and protect the city's park lands through which the river flows. To do this two things were necessary:

(a) to build a trunk sewer paralleling the river.

This was provided by the County of Westchester, being completed and ready for connections during the year 1911. It provided an outlet for the municipal sewer systems between Wakefield and North White Plains.

(b) to preserve the river and adjoining low lands from pollution by eliminating garbage dumps, stables, refuse piles and other filth, which gravitated to the low lands along the unprotected stream. There was also sewage from several hundred houses, the owners of which had not connected and were making no provision to connect with the municipal sewer systems or the Bronx Valley Sewer. Refuse and sewage from these houses were discharged directly into the river, so that even with the partial relief afforded by the Bronx Valley Sewer, the river remained foul and slimy and a menace to health.

*Second:*— to provide a parked driveway outlet for New York City's hundreds of thousands of pleasure cars. The Bronx River Parkway connects the city's park and boulevard system with the state highways diverging from the great Kensico Dam and Reservoir and extending through Westchester and Putnam Counties, in which area the city owns nearly 30,000 acres of watershed lands and lakes, which with improvements represent a city expenditure of more than \$133,000,000.

These reports further show that in 1912 estimates based upon the assessed valuation for lands in New York City and double the assessed valuation for lands in Westchester County indicated that





CLEANING THE RIVER PREPARATORY TO DEVELOPMENT SHOWN BELOW



SAME VIEW AFTER IMPROVEMENT



the cost of the real estate including approximately \$100,000 for urgent sanitary work, would aggregate \$4,000,000. These estimates did not include the cost of developing the Reservation into a finished parkway with drives, bridges, etc., for which there were no data then available. Subsequent reports showed that after the city had finally approved the project, the Commission acquired by gift and by direct purchase two-thirds of the necessary real estate for approximately \$4,000,000, but that the one-third remaining had to be acquired by condemnation, which when all of the awards are determined by the commissioners of appraisal appointed by the courts will exceed the cost of the two-thirds acquired by direct purchase.

When the United States entered the war, not only had the greater part of the land been acquired, but development plans were well advanced and reclamation work, including drainage of swamps, demolition or removal of buildings and clearing away of filth, garbage and refuse, cleaning of the river's bed, removal of billboards, and elimination of 150 odd sources of pollution, had been completed and preliminary improvement work was under way before such operations were cut to the minimum on account of the war.

At the beginning of 1920 construction funds for the first time



NORTH OF BRONX PARK — BEFORE IMPROVEMENT



were available in a substantial amount and the work of developing the Parkway Reservation was attacked with vigor. The major items to be done were the following:

Relocating and deepening 7 miles of river channel for flood regulation, to provide filling material for driveway grading and low lands along the river, and to permit screening out railroad embankment.

Stripping and storing top soil and, after rough grading, replacing same upon areas to be planted or seeded.

Excavating, hauling and placing more than 1,000,000 cubic yards of filling material.

Laying storm water drains and under drainage systems.

Construction of 35 driveway bridges and under-crossings.

Footbridges, retaining walls and river bank protection.

Laying 400,000 square yards of driveway pavement.

Spreading topsoil, fine grading, seeding and planting of 1200 acres of park lands with trees and shrubs.



APPROXIMATELY SAME VIEWPOINT AS PRECEDING PICTURE





BEFORE IMPROVEMENT  
*Looking south toward Gun Hill Road*

During the early months of 1920 it was the common belief that construction costs — both labor and materials — would recede and that the supply would be abundant. A program was, therefore, laid down which provided for completing parkway improvement work within three years. Contrary, however, to general expectation instead of there being an abundance of labor and materials available at lower prices, there was keen bidding for both of these commodities and prices advanced sharply to a point where the Commission felt it would not be justified in bidding higher for labor and materials for park work and the program for that year, therefore, was somewhat curtailed.

With labor costs at such high levels, it was recognized that labor-saving machinery in considerable quantity was essential. But machinery costs were also high and deliveries slow — it usually requiring six months for shipment. At this juncture efforts were made to obtain from the Government, if possible, some of the surplus war equipment which had been provided too late for service in France. The Commission's Engineer investigated and found that Congress had authorized the Secretary of War to distribute such surplus equipment as was suitable for road building purposes to the State Highway Commissions, but only for use on rural post roads. He, therefore, secured the necessary amendment to the





SAME VIEW — AFTER IMPROVEMENT

Federal Act, by which the Congress sanctioned the use of such road building material and equipment not only by State Highway Commissions, but by other State boards or commissions building public roads. Under this authorization machinery and materials were obtained aggregating in value more than \$400,000. The cost to the Commission was handling and freight charges. Without this equipment it would not have been possible to have achieved the gratifying results set forth in the Engineer's report herewith.

With the opening of the construction season in 1921 the most important units of Government equipment had been set up ready for work and with labor and material costs slightly lower, it was possible to accomplish more than during the preceding year and at lower unit costs. At the beginning of 1922, notwithstanding the necessity of slowing down during 1920, the construction program was shaped to complete all grading work, bridge construction and a substantial amount of the driveway paving before the close of 1922, which was the time when the members of the Commission had in 1919 hoped to complete the project. This would have left only the paving of two sections for the following year and this program could have been carried through had New York City's share of the funds requisitioned for construction work in 1922 been made available as requested. The Commission's application was filed





NEW RIVER CHANNEL AT WAKEFIELD  
*Plant growth quickly establishes itself on new shore lines*





AT FOX MEADOW BROOK

Carrere & Hastings, Architects



with the Board of Estimate early in September 1921. Information requested by the Board in December and February was promptly furnished. Westchester County appropriated its share in the spring of 1922, but notwithstanding repeated requests, no action was taken by the New York City authorities until on November 3, 1922, the Board of Estimate formally denied the Commission's request. This matter is now in the courts as is more fully set forth elsewhere in this report.

Under these circumstances having available only the share of the County of Westchester for 1922 plus the unexpended balances carried over from the preceding year, the Commission was forced to slow down its program. There were not sufficient funds to let contracts for paving and the construction of several bridges had to be deferred. With the limited amount available, first attention was given to driveway grading and river regulation, including also the construction of such bridges as could be built with funds at hand. At the close of the construction season the Commission is, therefore, able to report that the completion of the driveway grading is practically accomplished so that the sections remaining unpaved will have the benefit of the solidifying effect of frost and winter rains and will be ready for pavement next season throughout the remainder of the Reservation.

If New York City's share of the amount required for the 1922 construction program had been made available in the usual way, the few bridges remaining to be built and substantial sections of pavement would have been completed this year. It would then have been possible to finish paving the driveway to the Kensico Dam and wind up the other miscellaneous items of construction work, so that the project could have been completed by the end of the construction season of 1923. It is to be regretted that this lack of funds during the season just closed has thus delayed the completion of the project and has also increased the cost to complete. Nevertheless, preparations for driveway pavement are so far advanced that with funds available early in 1923, the Commission will still be able to finish the major item of improvement; that is, the paving of the Parkway Drive from Bronx Park to Kensico Dam during 1923. There will remain for the following season miscellaneous items of work and the finished grading, seeding and planting along the driveway, which must needs be deferred until the pavement itself is laid.

As will more fully appear from the accompanying report of the Counsel, the land acquisition is practically complete. Of the 1330 parcels in the Reservation area approved for purchase by the Board of Estimate and excluding street lands, 1291 have been acquired, 10





BATHING POOL AT WILLIAMSBRIDGE





PERIODIC FLOODING NEAR BRONX PARK

*Before*



BALL GROUND ON FORMER FLOODED AREA

*After*



are in process of acquisition, and 29 have not been acquired, of which 28 are owned either by the City of New York or County of Westchester and will, therefore, not have to be purchased.

#### APPROPRIATIONS TO DATE

The total appropriations for the Bronx Parkway Commission for all purposes, including acquisition of land, prior to January 1, 1923, are as follows:

Appropriated by the City of New York.....	\$8,634,278 43
Appropriated by the County of Westchester..	3,145,152 82
	<hr/>
Total.....	\$11,779,431 25
	<hr/> <hr/>

The payment by the City and County in the prescribed ratio of three-fourths and one-fourth was adhered to until 1922. The City, however, failed to appropriate its share of the amount required for improvements in 1922; whereas, Westchester County provided the funds requested so that the County has now appropriated more than one-fourth of the total to date.

#### ESTIMATED COST TO COMPLETE

The estimated amount required to complete the development of the Parkway Reservation in accordance with the Commission's program, in addition to New York City's share, \$801,000, of the 1922 requisition not yet paid, is..... \$1,785,000 00

This amount is 15 per cent above an estimate prepared in February, 1922 and is based on the rise in cost of labor and some materials since that date and the additional overhead due to delay.

New York City's share of this amount is.....	\$1,338,750 00
which added to the.....	801,000 00

---

due from the City on account of the 1922 request

makes a total of.....	\$2,139,750 00
The share of the County of Westchester is.....	446,250 00

---

Upon a careful analysis it can be stated that the entire work can be completed within eighteen months after the opening of the 1923 construction

season within the total amount of..... \$2,586,000 00 provided the greater portion of this amount is available for letting contracts in the spring of 1923 and the remainder as required by the





*Fairchild Aerial Camera Corporation*

AIRPLANE VIEW OF THE NORTHERLY TERMINUS OF THE BRONX RIVER PARKWAY, SHOWING KENSICO DAM, RESERVOIR, AND PART OF WATERSHED LANDS OWNED BY THE CITY OF NEW YORK

*In Westchester and Putnam Counties, New York City owns nearly 30,000 acres of picturesque watershed lands and lakes, costing with improvements more than \$133,000,000. The Bronx River Parkway provides a direct connection between the State highways in this great watershed system and the City's parks and boulevards.*



Commission. If there is additional delay, the cost will be further increased by the necessity of carrying the construction organization over a longer period.

The above figure is exclusive of the amount required to meet awards in pending condemnation proceedings, the status of which is more fully set forth in the accompanying report of the Counsel.

#### RE-ORGANIZATION UPON COMPLETION

*With completion of the Parkway near at hand, it is not too early to consider plans for transferring its control to a permanent maintenance organization.*

*The Parkway law provides for maintenance and the Commission's tenure is not limited, but the present Commissioners have from the beginning regarded the existing parkway board as a construction commission charged with the duty of acquiring the land, eliminating nuisances and building the Parkway. They have tried to speed the day when, fully improved, this great parkway with its recreational facilities and pleasure traffic route could be thrown open to the public from Bronx Park to the Kensico Dam, and its care transferred to such maintenance organization as the legislature may prescribe. The lands have now been acquired, the river and valley cleared of filth and pollution and improvement of the Parkway is so far advanced that with funds available early next spring to complete construction, this transfer to a maintenance organization could be made effective in the autumn of 1924.*

#### SUGGESTIONS FOR MAINTENANCE ADMINISTRATION

Various plans have been discussed for placing the Parkway on a permanent maintenance basis as soon as the construction work is finished. Full consideration has been given to the several suggestions made. The essential thing is to insure unified control. One suggestion is to have the Commission composed, after the Parkway has been completed, of officials ex officio representing the City, County and State, such for example as the following:

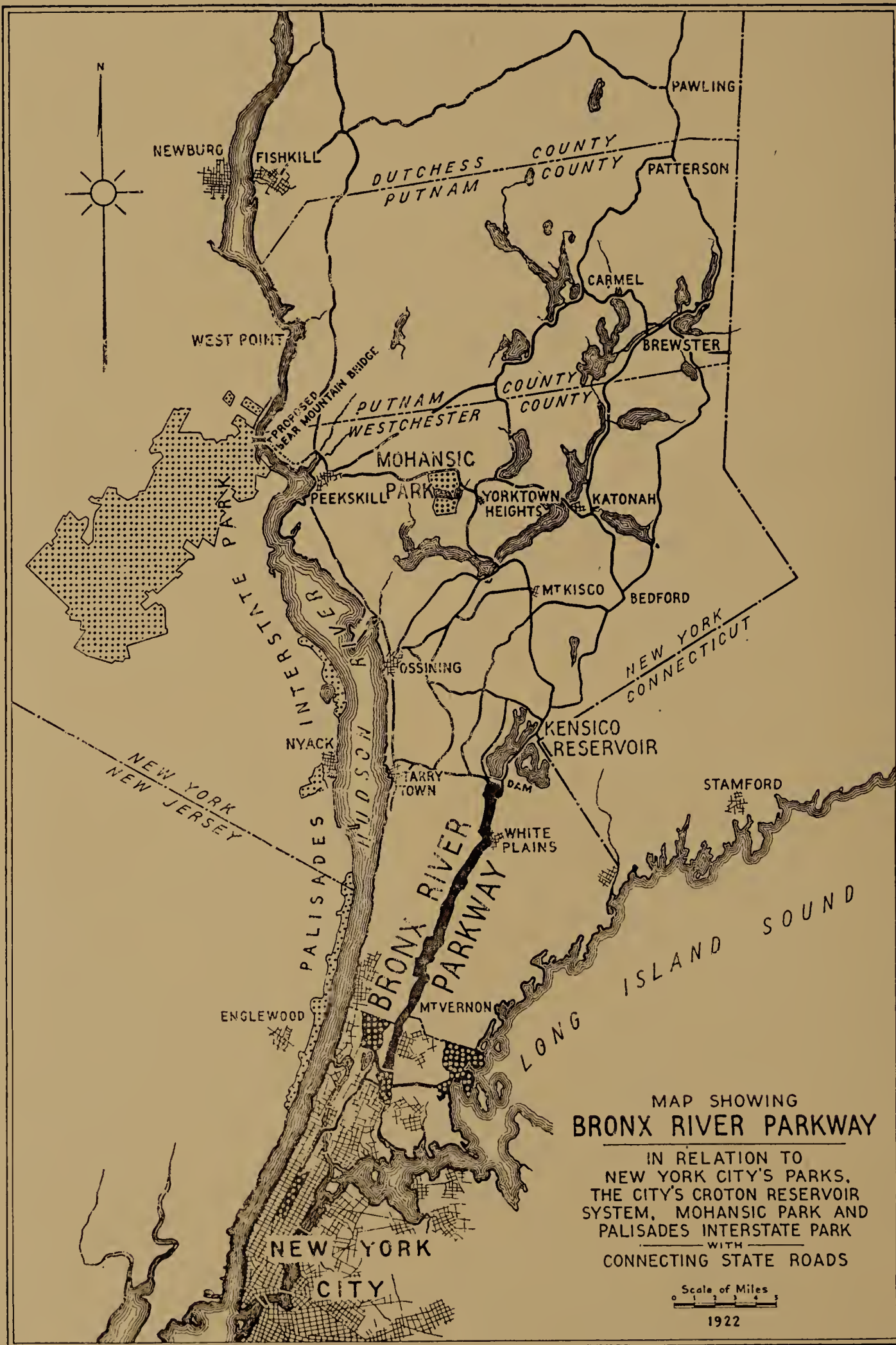
The Mayor of the City of New York.

The Chairman of the Board of Supervisors of Westchester County.

The Conservation Commissioner of the State of New York.

These officials could act either personally or through substitutes, such as the Mayor through his Commissioner of Parks for The Bronx, the Chairman of the Board of Supervisors through the President of the Westchester County Park Commission, and the Conservation Commissioner through a deputy.

This plan would further provide that the above named officials would succeed the present Commissioners eighteen months after the



MAP SHOWING  
BRONX RIVER PARKWAY

IN RELATION TO  
NEW YORK CITY'S PARKS,  
THE CITY'S CROTON RESERVOIR  
SYSTEM, MOHANSIC PARK AND  
PALISADES INTERSTATE PARK  
WITH  
CONNECTING STATE ROADS

Scale of Miles  
0 1 2 3 4 5  
1922



City and County authorities had made available the total amount of \$2,586,000 required to complete the development of the Parkway.

Those who are considering New York State's outlying parks and parkways from a state-wide standpoint have suggested another plan which provides for maintenance by the State through the agency of a State Commission with three members to be appointed by the Governor substantially as under the existing law. The proponents of this plan hold that the State must soon connect up its existing parks and develop a state-wide park system. It is pointed out that the Bronx River Parkway will be of service to seven million people and that from its northerly terminus at the Kensico Dam the State should by widening and improving existing highways develop an adequate connection via Mohansic Park to the new Bear Mountain-Hudson River bridge and the Palisades Interstate Park at Bear Mountain.

There is no fundamental objection to this plan, if the State will provide annually an adequate amount for maintenance, and this plan also could become operative eighteen months after the balance of the construction funds had been provided.

Both of the preceding plans provide for unified control of the Reservation. It is essential for the river, driveway and park lands to be maintained as a unit throughout the Parkway Reservation. This is important also for the regulation of the enormous traffic which has already assumed large proportions on the sections now open. That this traffic, particularly on Sundays and other heavy traffic days, will flow out from the City in tremendous volume is a certainty to be reckoned with and can best be regulated under unified control. On such heavy traffic days the Bronx River Valley will be practically dedicated to the service of New York City as a great pleasure traffic route between the City's park system and the City's watershed lands at Kensico Reservoir. The Bronx River Parkway, in which New York City and Westchester County will have invested approximately \$15,000,000 is destined to be known as one of the greatest improvements of its kind and when fully opened to the public would not be relinquished for many times its cost.

#### MANDAMUS AGAINST THE BOARD OF ESTIMATE

The refusal of the Board of Estimate to provide the City's share of completing the Parkway improvements resulted in the Commission's applying to the courts for mandamus orders to require the Board to comply with the provisions of the Parkway Law. The City, after ten years of cooperation in the project and the appropriation of more than \$8,000,000 made at various times during the incumbency of three city administrations, now contends that the





PARKWAY DRIVE AT WILLIAMSBRIDGE





DRIVEWAY CROSSING NEAR CRESTWOOD

Charles W. Stoughton  
Architect



Parkway Law is unconstitutional. A claim is advanced as a further defense that when the Board of Estimate approved the Parkway project in 1912 and again in 1913, the Parkway Commission suppressed the fact that the Bronx Valley trunk sewer had been constructed and was then in operation in Westchester County.

Without attempting to conjecture how a public statute of such importance to the City of New York as the statute to provide for the Bronx Valley Sewer, which was several times amended and the work carried on under it extending for miles in the County of Westchester, could possibly be suppressed from such a body as the Board of Estimate and Apportionment of the City of New York, the fact is that the Bronx Parkway Commission itself took particular pains to explain the relationship of the sewer project to the problem of the Bronx River Valley sought to be completely solved by the Bronx River Parkway. For in its report of April 15, 1912, which was placed before the Board of Estimate for the specific purpose of obtaining its approval of the project, there were several references in which the Bronx Valley Sewer was specifically called to the attention of the new Board, as follows:

At page 6:

“ This map or plan was not completed until the Commission had



FORMER SEWAGE POLLUTION NEAR WHITE PLAINS

Photo taken in 1915

*154 cases of pollution were eliminated*



obtained such information as was available as to the proposed plans of the New York Central Railroad Company, \* \* \* \* and of the Bronx Valley Sewer Commission, which was working upon a plan for a great trunk sewer through the valley of the river from White Plains to Woodlawn, \* \* \* \*. A map or plan was prepared by the engineer showing all of these proposed improvements so far as they had developed at the time of the preparation of the map. This map accompanied the first Report of the Commission."

At page 13:

"The trunk sewer through the Bronx Valley in Westchester County has solved a difficult problem by providing sewerage for the adjacent communities, and has materially reduced the cost of this project as the sewer easement has been paid for and the cost of securing the remaining private interest in the sewer strip should be nearly nominal."

At page 23:

"The Bronx Valley Sewer Commission has condemned a right of way from White Plains to Wakefield."

At page 24:

"The Bronx Valley Sewer Commission has condemned a right of way through practically the entire reservation to the City line, which will be available for park utilization."

In the report of the sub-committee of the Board of Estimate consisting of the Comptroller and the President of the Borough of The Bronx, which recommended the approval of the Parkway, there is the following reference to the Bronx Valley Sewer:

"The County of Westchester has under construction a sewer extending from North White Plains south to the City line and thence west to the Hudson River, which is nearing completion. It is designed to take care of house sewage for a population of about 850,000. This will greatly relieve the situation, but it will not prevent stable and other refuse, which is fully as injurious as house sewage, from reaching the river. The only way by which this can be remedied is by ownership of the property along its banks and the removal of these stables and other unsanitary features."

The mandamus proceedings were argued in the Supreme Court in New York County the latter part of November, 1922, and several weeks later the Court's decision was announced, upholding the validity of the Parkway Law and directing the members of the Board of Estimate to make the appropriations requested,



LOOKING TOWARD NEW YORK CITY LINE



## AMENDMENT TO PARKWAY LAW

(Chapter 604, Laws of 1922)

With the opening of the Bronx River Parkway Drive between Woodlawn and Mt. Vernon and between Scarsdale and White Plains, traffic began to flow heavily through these sections. It soon became apparent that adequate provision must be made for regulating motor traffic on the drive so as to prevent speeding and reckless driving and protecting the Reservation from damage by thoughtless and in many cases wilful depredations by that class of persons who forget that public parks or parkways should be used — not abused. The Bronx River is one of the boundaries of each of twelve separate municipalities, through which the Parkway runs, and owing largely to the river's winding course, the Parkway Drive actually changes from one police jurisdiction to another no less than thirty-six times in the  $15\frac{1}{2}$  miles between Bronx Park and the Kensico Dam. For this reason the control of traffic by local police would have been impracticable and unnecessarily expensive owing to the number of different municipalities through which the Parkway passes. Though the Commission had the right to make rules and regulations for the government of the Parkway, the power to enforce these rules was by the obviously inadequate means of a civil action to recover a penalty. A bill was, therefore, prepared to amend the Parkway law by providing that violations of Parkway ordinances should be penal offenses, jurisdiction over which was conferred on the local criminal courts, and authorizing the appointment of patrolmen. These provisions follow established precedents, such for example as the Palisades Interstate Park.

The 1922 amendment also authorized the Commission to acquire, if the Board of Estimate of the City of New York approves, two parcels in addition to the seventeen parcels specified in the original act. Parcel 18 is a small low lying tract in the City of Yonkers near Crestwood Station, which was intended to be included in the original act, but through confusion of street names was omitted, and which may be affected by the impounding of one of the largest lakes in the Reservation. Parcel 19 adjoins the southerly end of the plaza owned by the City of New York below the Kensico Dam, and should be acquired to provide a more satisfactory and less expensive location for carrying the Parkway Drive over the railroad tracks to a connection with the existing drives on City property below the Kensico Dam.





GUN HILL ROAD BRIDGE, BUILT BY THE CITY OF NEW YORK  
*Parkway foot bridge in middle distance*

Charles W. Stoughton  
Architect



### *Bridges*

The Parkway Reservation has been developed along natural lines and artificial effects have been avoided. The former natural beauty of the valley is being restored. There are to be no ornate buildings and the only outstanding structures are the viaducts and bridges. A number of these are required. Some of those already completed are illustrated in this report. In connection with the design of these bridges the Commission and its staff have appreciated their opportunity as well as the responsibility devolving upon them. The Commission's engineers have designed carefully to insure stability without excessive cost and able architects have generously cooperated to the end that beauty may be combined with utility and permanence. The bridges have been designed to fit their natural surroundings and built solidly they should endure for centuries and mellow with the passing years.

### *Driveway Sections Completed*

The Parkway Drive is paved from Bronx Park to Mount Vernon and from Crane Road, Scarsdale, to Woodland Place, White Plains.

### *Separation of Grades at Main Highway Crossings*

From the beginning it was recognized that the Parkway Drive built to accommodate four lines of fast moving pleasure vehicles should, wherever practicable, be carried over or under the more important intersecting streets. Negotiations were accordingly opened with those municipal boards which had street improvements in progress or plans prepared, which could be modified to avoid carrying streets over the Parkway Drive at grade. These negotiations resulted in a separation of grades at the following streets:

Gun Hill Road . . . . .	Completed
McLean Avenue . . . . .	Plans approved
Wakefield Avenue . . . . .	Plans approved
Fleetwood Avenue, Mt. Vernon . . . . .	Completed
Tibbits Avenue, White Plains . . . . .	Completed
Hamilton Avenue, White Plains . . . . .	Completed

The most important of these from a traffic standpoint is Gun Hill Road, which carries heavy crosstown vehicular traffic as well as double track trolley and elevated railroad structure.

In addition to the above there were other highways crossing the Parkway carrying such heavy traffic that with the completion of the Parkway Drive, some measure of regulation by traffic officers at the intersections would obviously have to be provided. When the first plans were formulated, careful studies were made of these crossings



and the several problems were clearly defined. At that time, however, it was felt that the expenditure for bridge structures to separate the grades at these points could be deferred, at least, for a few years. These items were, therefore, not included in the construction program prepared prior to the outbreak of the war. After the war, motor traffic had increased to such proportions that when construction was resumed, it was apparent that the grades at the most important cross streets would have to be separated, if costly regulation and danger to life and limb were to be avoided, and to defer such work would only increase the cost. The Commission, therefore, revised its plans to provide for carrying the Parkway Drive under the following streets:

Palmer Avenue, Bronxville.....	Completed
Pondfield Road West or Swain St.....	Completed
Tuckahoe Road.....	Approaches graded
Ardsley Road, Scarsdale.....	Plans approved
Main Street, White Plains.....	Approaches graded

Two additional grade crossings are to be eliminated by the City of Yonkers upon plans approved by the Commission. One improvement will carry Park Avenue over the Parkway Drive between Bronx River Road and Scarsdale Road, and will replace an existing dirt road with heavy grades and dangerous crossing. The other crossing is at Thompson Street, leading to the Crestwood Station. The bridge carrying the street will be constructed by the City of Yonkers. The Commission's obligation is limited to an amount equal to what it would have cost to fill the approaches to a crossing at grade.

There still remain two important grade crossings, one which should ultimately be eliminated, at Mt. Vernon Avenue, Mt. Vernon, and one at Fenimore Road, Scarsdale. The situation at Mt. Vernon avenue is difficult to remedy. The Parkway Drive is immediately adjacent to the Bronx River, spanned by a permanent stone arched bridge built by the County of Westchester some years ago. Just east of this bridge Mt. Vernon Avenue crosses under the New York Central Railroad and by reason of these bridges the elevation of Mt. Vernon Avenue is fixed and to eliminate the crossing the Parkway Drive would have to be constructed at heavy cost below the level of the river because it would not be practical to cross on an overhead structure.

At Fenimore Road, it will be practicable to eliminate the grade crossing by carrying the Parkway Drive underneath Fenimore Road. The Commission cannot proceed, however, until the village authorities have made other provision for the local traffic





BRIDGE JUST NORTH OF GUN HILL ROAD

Charles W. Stoughton  
Architect





GARBAGE DUMP — WHITE PLAINS  
*Before improvement*



SAME VIEW — SANITARY CONDITIONS RESTORED



between Greenacres Avenue and Fenimore Road, which involves a general rearrangement of access roads to and from the station plaza.

From the above it will be noted that provision has been made for separation of grades at a total of thirteen street and highway crossings. Of those remaining the two at Mt. Vernon Avenue and Fenimore Road will require more or less regulation by traffic officers to promote safety and avoid congestion until they can ultimately be eliminated.

### COMPARISON OF COSTS

The Harlem River Speedway, which has recently been paved and thrown open to the public for automobile traffic, is a somewhat similar development and affords an interesting comparison of cost with the Bronx River Parkway. The original Speedway was constructed between 1893 and 1896 and includes an area of approximately 52.5 acres with a total length of 2.14 miles. The newly paved driveway is 75 feet in width between 155th and 166th Streets and 50 feet in width between 166th and Dyckman Streets. When the land was acquired and the Speedway built, more than twenty-five years ago, the territory in which it is located was undeveloped in comparison to its present state and construction costs were about one-half of the present scale.

The Bronx River Parkway Reservation contains approximately 1,200 acres and its length is 15½ miles. A modern pavement, 40 feet in width, consisting of a bituminous wearing surface on a concrete base, will extend throughout its entire length, requiring heavy grading, numerous bridges, retaining walls, drains, etc. In addition, the entire area is receiving landscape treatment in the way of grading, widening and deepening of the river, construction of lakes and pools, seeding and planting to complete a well designed parkway.

In comparing these costs, consideration should be given to the great advance in the price of labor and materials since the Speedway was constructed prior to 1896.

	Area of land, acres	Cost of development	Length, miles	Average cost of development per mile
Harlem River Speedway.....	52.5	\$2,850,874	2.14	\$1,332,000
Bronx River Parkway.....	1200.0	6,000,000	15.50	387,000

In 1922 before it was opened for automobile traffic, the Speedway was paved at a cost, in addition to the above, of \$111,000 per mile.



## CONCLUSION

There has been no change in the personnel of the Commissioners since the Commission was created in 1907, except that Frank H. Bethell was appointed to succeed the late James G. Cannon a few months after the latter's death in 1916.

Madison Grant of Manhattan was appointed by Governor Hughes in 1907; reappointed by Governor Dix in 1912; by Governor Whitman in 1917 and by Governor Miller in 1922.

William White Niles of The Bronx was appointed by Governor Hughes in 1907; again by Governor Hughes in 1910; by Governor Whitman in 1915; and by Governor Miller in 1921.

James G. Cannon of Scarsdale, Westchester County, was appointed by Governor Hughes in 1907; reappointed by Governor Dix in 1911, and shortly before his death in 1916, received a reappointment from Governor Whitman.

Frank H. Bethell of Scarsdale was appointed by Governor Whitman in January, 1917, to succeed Mr. Cannon and reappointed for a full term by Governor Miller in 1921.

The Commissioners desire to express their appreciation for the cordial support they have received from the many associations and public spirited individuals who have shown keen interest in the public work so soon to be dedicated to the full use for which it was planned.

Respectfully submitted,

MADISON GRANT, *President*,  
WILLIAM WHITE NILES, *Vice President*,  
FRANK H. BETHELL, *Treasurer*,  
*Bronx Parkway Commission.*

December 31, 1922.





DUCK ISLAND — WAKEFIELD, NEW YORK CITY





BRIDGE NEAR HARNEY ROAD

Charles W. Stoughton, Architect

*To avoid expensive coffer dams and pumping, this bridge was constructed in an open field, before the river was necessarily diverted to provide location of driveway*



# REPORT OF THE ENGINEER AND SECRETARY

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December 31, 1922.

BRONX PARKWAY COMMISSION,  
342 Madison Avenue,  
New York City.

GENTLEMEN.— The general policy approved by your commission with respect to the development of the Bronx River Parkway included what may be termed basic requirements as follows:

Abolition of sewage, stable and factory pollution, garbage dumps and other filth and refuse from the Reservation.

Thoroughly cleaning the bed of the Bronx River, removing debris and re-locating and deepening the channel where necessary for adequate flood control.

Preservation of natural features, including adequate care of existing trees.

Conservation of top-soil and re-distribution of same over newly graded areas to insure healthy tree growth and bountiful plant food supply.

Re-forestation and landscape treatment along natural lines — avoiding exotics.

For the driveway, a well compacted sub-grade above highest flood levels, under-drained where necessary to insure stability, paved with concrete base and surfaced with one of the bituminous types found to be most durable under pneumatic tire traffic.

Bridges to be carefully designed and built for permanence with architectural treatment in harmony with their natural surroundings.

Exposed surfaces of bridges, retaining walls, etc., to be of native stone with avoidance of formal cut stone effects. Only long span viaducts to have outside surfaces of concrete.

Guard rails and footbridges to be of substantial, rustic construction and lighting standards to harmonize with the natural treatment of the Parkway.

These requirements have been adhered to both in the designs for and execution of the work of developing the Parkway — all of which has proceeded in substantial accordance with the general plans approved and published in 1918.

In a work of such large volume involving, nevertheless, painstaking attention to details, a full description would extend far beyond the scope of this report. Let it suffice then to discuss very briefly the major items, such as:

Grading and River Regulation  
Bridges and Undercrossings  
Drains and Miscellaneous Structures  
Paving  
Contracts



## DREDGING AND GRADING OPERATIONS



DRAGLINE EXCAVATOR



LOADING DREDGED MATERIALS



ARTILLERY TRACTOR AND ITS DIRT WAGON TRAIN



## GRADING AND RIVER REGULATION

The method adopted for draining swamps and reclaiming low land subject to frequent overflow and at the same time obtaining filling material, has been fully set forth in previous reports. Instead of attempting to fill up the swamps and low meadow lands above flood level, which would have been enormously expensive, besides destroying many of the existing trees and shrubs, the general level of the river was lowered by dredging and removal of barriers. In this manner the surface of the river as well as the water table of adjacent lands were lowered from one to two and a half feet. This was equivalent to an equal depth of filling and at a fraction of the cost.

The material taken from the river during this process was used in the driveway sub-grade and for filling in low spots, swampy areas and for general grading. These operations were complicated by the necessity for conserving top soil. Instead of the usual method of excavating from one area and depositing upon another area, it is necessary in park work where top soil is of such importance, to first strip the top soil from both the area to be excavated and the area to be filled in and store it in piles until rough grading operations are completed. Then the top soil must be replaced and spread in connection with the finished grading preparatory to planting and seeding. Owing to the thickness of the top soil on the rich bottom lands of the Parkway, these storage piles assumed large proportions and careful planning was required to place this material so as to avoid interference with other grading and construction operations, which had to be completed before the top soil could be replaced upon graded areas.

The construction machinery and equipment obtained from the War Department made it possible to organize grading operations on a large scale with work proceeding simultaneously in two and sometimes three sections. Two Monighan dragline excavators and one steam shovel were purchased and five new Bucyrus



DISTRIBUTING DREDGED MATERIAL ALONG DRIVEWAY FILL



steam shovels were obtained from the War Department. Two of these were changed for latest type Bucyrus draglines mounted on caterpillar traction and on the other three the traction wheels were changed to caterpillars. A well balanced plant was thus obtained consisting of four dragline excavators and four steam shovels, supplemented by one Winther derrick truck, a mobile unit of great value on this work, two hand derricks, one 10-ton stiff leg derrick with gasoline hoist for retaining wall and bridge work, and eleven caterpillar tractors with accompanying dump trailers. This equipment was supplemented by a full quota of motor trucks, including a fleet of five and one-half ton dump trucks for long haul work.

Grading operations by Commission forces were supplemented in some locations by cinder filling obtained by contract, particularly between Williamsbridge and Woodlawn. Cinders were also used to an average depth of about one foot on sub-grade between Mount Vernon and Bronxville. At the date of this report grading of the Parkway Drive has been completed except for a short section below Scarsdale and for approaches to the railroad crossing and plaza below the Kensico Dam. Finished grading, planting and seeding has been completed from Bronx Park to Fleetwood Avenue, Bronxville; between Bronxville and Tuckahoe, and between Scarsdale and White Plains. Fine grading and seeding of the remaining sections cannot be finally completed until the driveway pavement is laid.



NORTH OF MC LEAN AVE.— BEFORE IMPROVEMENT



942,700 cubic yards of filling material and top soil has been placed in final position to date. A large proportion of this material was wet excavation from the river or lakes, which had to be piled for draining and drying and then re-handled. Another large item consisted of top soil, re-handled as previously explained. A rough estimate indicates that including such re-handling the total volume of material moved would aggregate 1,500,000 cubic yards.

### *Bridges and Undercrossings*

Twenty-seven driveway bridges over the river, two bridges over the tracks of the New York Central Railroad and six undercrossings to separate the grade of the driveway from the grade of intersecting streets are included in the construction program.

The greater number of the driveway bridges over the Bronx River are from 40 to 52 feet in span and generally 40 feet in clear width between curbs.

In general, stone faced arch bridges have been adopted as being the most suitable for park purposes, and the first bridges were designed and constructed as reinforced-concrete true arches faced with granite arch rings and with rubble facing for the spandrels, and approach walls which were backed with concrete. The parapets were solid rubble with native granite copings.

In view of the number of these driveway bridges to be constructed, it was desirable to evolve a type of bridge which would present the appearance of a true arch and yet make possible a considerable reduction in the quantities of



SAME VIEW — DRIVEWAY ON SITE OF FORMER SWAMP



concrete and excavation required for a true arch design, more especially for arches of a small rise such as the ones under consideration. This was accomplished by the development of a type of reinforced concrete beam and slab construction masked by native granite arch rings and rubble facing for approach walls, spandrels and parapets. This type of construction has been used with satisfactory results in five of the bridges already constructed.

At some locations the grade of the driveway at river crossings is too low for an arched bridge without introducing an objectionable hump in the driveway profile. At such locations, a reinforced concrete beam and slab bridge similar to that previously described has been adopted. The outside girders are faced and coped with hewn timbers as in old-time timber beam bridges. The plain concrete approach walls are faced with native stone rubble. The heavy oak fencing is also hewn, pinned with oak pins and given a weathered stain.

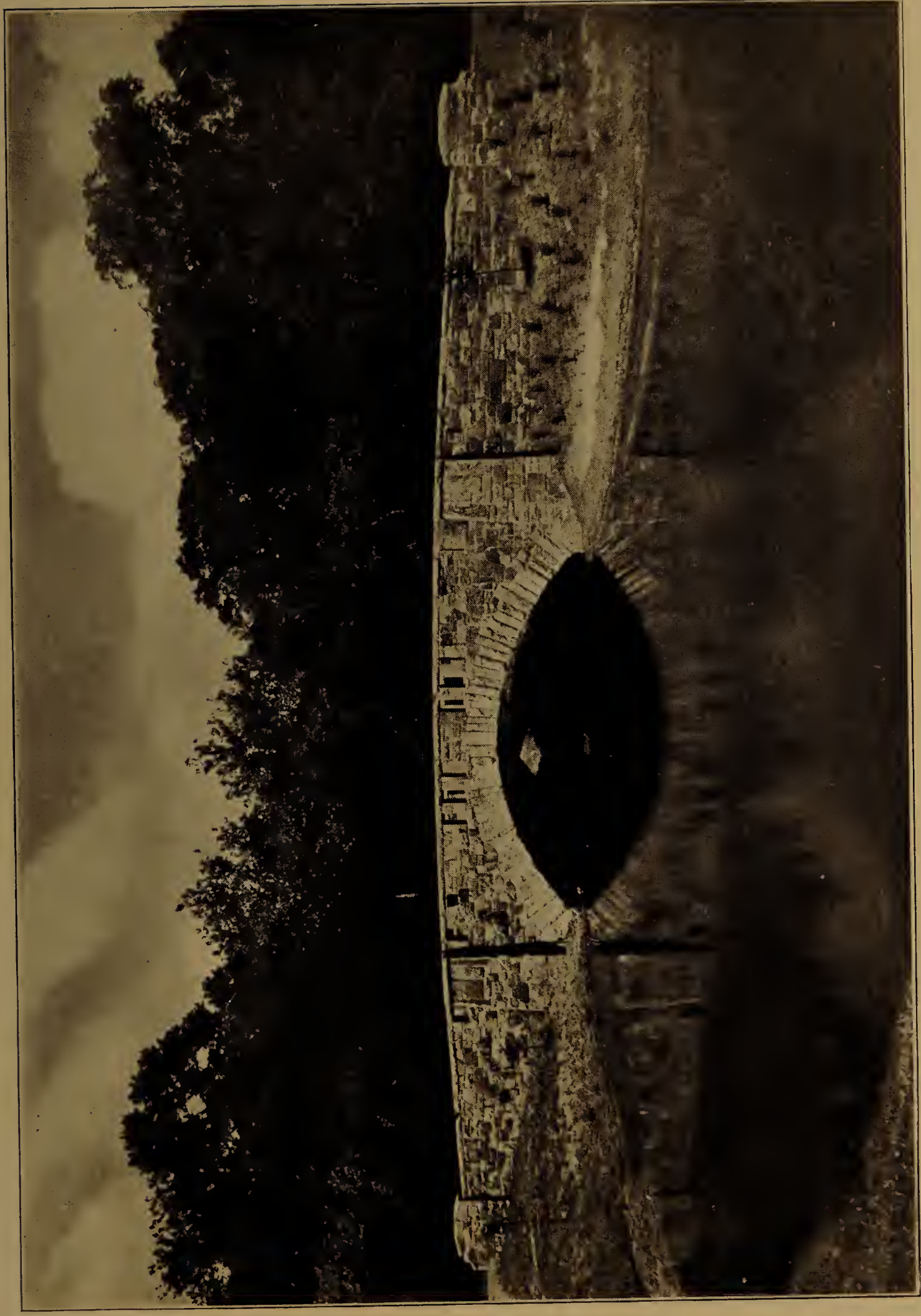
At six main highway crossings, the Parkway Drive will be carried under existing streets. These undercrossings are located near the Bronx River and because of the limited height between river level and grade of intersecting streets, a flat arch design was required. The conventional flat arch requires heavy abutments, and the Commission's Designing Engineer, Arthur G. Hayden, made an investigation to determine whether or not a less expensive type of structure could be evolved which would have the appearance of a true arch and yet eliminate the heavy abutments. Mr. Hayden finally developed a rigid frame structure which, using every day terms in place of technical terms, he described as follows:

"The reinforced-concrete frame consists essentially of a solid "roof" continuous with and supported by two solid side "walls" like the ceiling and two of the walls of a room. The roof supports the overhead street, carrying it over the driveway below and may be flat, or arched for architectural effect. The clear distance between the walls of the structure at the sides of the drive is about 42 feet. The clear height between the driveway and "roof" is 15 feet at the middle of the drive. The width required to carry the street and sidewalks over the drive varies for different structures but is about 50 feet.

"It had apparently not occurred before to engineers that such a design was feasible for conditions similar to those existing in our undercrossings, because the line of pressure departs so far from the axis of the section, causing heavy bending throughout the structure in addition to the thrusts; particularly at the "crown" or middle of the roof and at the "knees" or juncture of roof and walls. Also complicated conditions of stress are set up at the bend of the "knees."

"Tests were made under our direction at Columbia University on models of knees to determine these conditions preliminary to adopting the rigid frame type of structure, and the results assisted greatly in the work of design. Advantage was also taken of the truth of an apparent anomaly in order to solve difficulties that were met in designing the crown sections; namely that in certain statically indeterminate structures, if severe conditions of stress occur in one part, they may be met by making that part of the structure more flexible and hence weaker, instead of stronger; thus transferring the burden of internal work to other parts which can be more easily proportioned to the resulting stresses. In this way a minimum crown thickness was used in our undercrossing structures which permitted us to maintain allowable roadway grades.





Charles W. Stoughton, Architect

PARKWAY DRIVE BRIDGE AT FLEETWOOD





PARKWAY DRIVE BRIDGE NORTH OF DE WITT AVENUE, BRONXVILLE

Charles W. Stoughton  
Architect





TEST LOAD OF 40 TONS ON NEW TYPE OF BRIDGE AT SWAIN STREET UNDERCROSSING

"Determination of the balance between the proportions of different parts of the structure necessary to accomplish the desired result was an interesting mathematical problem.

"The design will result in a very substantial saving in construction cost for the undercrossings. The beauty of the design lies in the extreme simplicity of the structure and ease in its construction."

The following driveway bridges have been completed:

- No. 1 — South of Gun Hill Road.
- No. 2 — North of Gun Hill Road.
- No. 9-A — South of Broad Street.
- No. 9-B — North of Broad Street.
- No. 13 — Near De Witt Avenue, Bronxville.
- No. 14 — Palmer Avenue Undercrossing.
- No. 15 — Swain Street Undercrossing.
- No. 17 — Near Tuckahoe Road.
- No. 18 — At Tuckahoe.
- No. 22 — Between Crestwood and Scarsdale.
- No. 23 — Between Crestwood and Scarsdale.
- No. 24 — Between Crestwood and Scarsdale.
- No. 29 — Between Scarsdale and Hartsdale.
- No. 30 — Between Scarsdale and Hartsdale.
- No. 32 — Between Hartsdale and White Plains.
- No. 33 — Between Hartsdale and White Plains.
- No. 34 — Woodland Place Viaduct at White Plains.

Broad Street Viaduct — Between Mt. Vernon and Bronxville.



### *Woodland Place Viaduct*

Bids were received on March 25, 1921, for the construction of Woodland Place Viaduct, this important structure being a joint undertaking of the Bronx Parkway Commission, City of White Plains and New York Central Railroad Company, the State of New York also contributing a share of the cost in accordance with the Railroad Law provisions for the elimination of grade crossings.

In the vicinity of Woodland Place, White Plains, the Parkway Reservation crosses from the easterly side of the railroad and river to the westerly side, and it was necessary for the Commission to carry the Parkway Drive across the valley at this point, which is near the old Tibbits Avenue grade crossing. For the elimination of this crossing, the City of White Plains and the Railroad Company had projected a viaduct. By joining forces with the other interested parties, the Commission secured the adoption of plans for an arched structure in harmony with parkway development, and the New York Central Railroad Company, the City of White Plains and the State of New York agreed to pay the sum of \$41,600 toward the proposed arched viaduct, which was the estimated cost of the steel and wood viaduct proposed to be built at Tibbits Avenue.

The lowest bidder for the construction work was J. F. Cogan Company, Contractors, of New York, whose bid of \$167,997.50 was accepted. The work was started on May 12, 1921, and completed on September 20, 1922, when the viaduct opened to traffic. The driveway approaches will be paved as soon as funds are available.

The viaduct arch span of 145' with 33 foot rise is an imposing structure as seen through the long valley vistas north and south of its location. The span is formed by four reinforced-concrete arch ribs on which rest spandrel columns, supporting the roadway on a gently cambered gradient and there is an agreeable treatment of balustrade details. The architectural design was furnished by Palmer and Hornbostel of New York City and structural design by Guy Vroman, C. E. The completed structure justifies the efforts of the Commission to secure a viaduct with satisfactory architectural treatment instead of the unsightly steel structure originally proposed.

### *Viaducts at East 238th Street and East 241st Street*

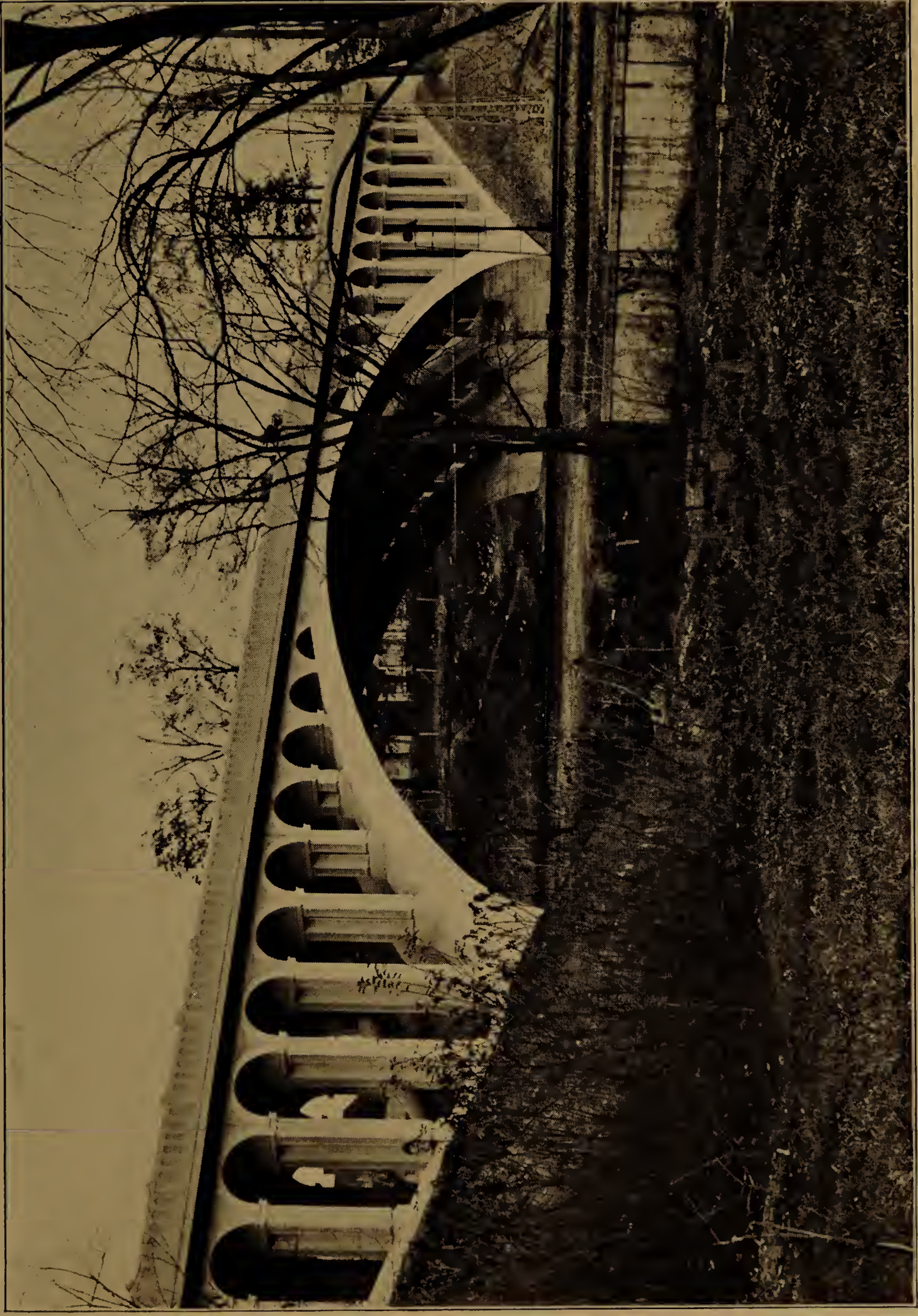
Orders were issued several years ago for the elimination of grade crossings at East 238th Street and East 241st Street, by the construction of viaducts crossing the Parkway Reservation and spanning the tracks of the New York Central and New York, New Haven and Hartford Railroads.

The railroad companies submitted plans for structures of the column and girder type, unsightly in appearance and inappropriate for location in the Parkway Reservation. These plans were the subject of extended study, negotiations and numerous hearings before the Public Service Commission, the object of which was to secure the substitution of plans calling for concrete arched structures instead of objectionable steel construction devoid of architectural design.

Successful culmination was reached in securing the adoption of plans finally agreed upon by all parties and covered by orders of the Public Service Commission.

At East 238th Street the adopted plan is for a concrete viaduct having ten arched spans, carrying panelled spandrel walls, sustaining an earth-filled roadway. The plans indicate an imposing structure in keeping with parkway development.





WOODLAND PLACE VIADUCT, WHITE PLAINS

Palmer & Hornbostel  
Architects





BROAD STREET VIADUCT

Hoppin and Koen, Architects



The proposed viaduct at East 241st Street crosses at a lower level and thorough investigation disclosed that the substitution of a concrete, arched design for the proposed steel frame-work structure would result in a formidable increase in total cost, without the architectural relief obtainable at East 238th Street.

As the best compromise between the desire for an architecturally suitable structure and resulting increased cost, the plans agreed upon are for a viaduct having filleted steel girder spans encased in concrete. For that portion of the viaduct which lies within the Parkway Reservation, the girders are supported on ornamental masonry piers and westerly end abutment.

At East 241st Street the topography and surroundings are not so well adapted to a monumental structure as at East 238th Street. A satisfactory solution is, therefore, furnished by the adopted plans for these two viaducts.

#### *Broad Street Viaduct*

The Broad Street Viaduct crosses the Parkway Reservation and is a dominating feature of the landscape about midway between Mount Vernon and Bronxville. The expense of its construction was borne principally by the cities of Mount Vernon and Yonkers, the New York Central Railroad Company and State of New York, in accordance with the provisions of the Railroad Law for elimination of grade crossings.

The original plans were for a steel structure that would have been objectionable in the Parkway, and the Commission, by negotiation with the various parties secured the adoption of plans for a reinforced concrete arched viaduct. While deeply interested in the character of the structure, the Commission had only a minor financial interest, incurred principally on account of a modification in the spacing of arch piers to accommodate the Parkway Drive and Bronx River.



ALONG THE SLOPE OF CHATTERTON HILL





WHERE THE DRIVEWAY PASSES UNDER BROAD STREET VIADUCT



After completing about 75 per cent of the work on the viaduct under a contract awarded early in 1917, the Crownbar Construction Co., Inc., stopped work on May 31, 1918.

On account of war conditions no further progress toward completion was made until May, 1920, when the contract for completing work was advertised. No bids were received and decision was made by the various interested parties to wait for more favorable conditions of labor and material markets.

On re-advertising, September 3, 1920, the lowest bid, in amount \$118,368.00, made by Louis J. Sieling, of New York City, was accepted.

Under the supervision of Guy Vroman, Consulting Engineer, satisfactory progress was made with the same excellence of workmanship produced by the original contractor.

The viaduct was completed September 14, 1921. The approach streets to the viaduct have been graded and improved by the cities of Mount Vernon and Yonkers.

The primary motive for this viaduct was elimination of a railroad grade crossing, and it provides an east and west street on which business and general traffic will be separated from traffic on the Parkway Drive. It consists of six reinforced-concrete, arch spans with architectural treatment by Hoppin and Koen of New York.



NORTH OF EAST 236TH STREET



#### DRAINS AND MISCELLANEOUS STRUCTURES

The following is a list of miscellaneous structures, drains, etc., completed to date:

##### *Retaining Walls and River Bank Protection*

Along river bank and adjacent to Bridge No. 1 south of Gun Hill Road, dry and mortar rubble partly on concrete foundation, 315 lin. ft. Average height 5'.

Along easterly river bank, south of Gun Hill Road, 200 lin. ft., dry rubble wall. Average height 4'.

Overlook wall west of driveway, opposite East 226th Street, mortar rubble, 200 lin. ft. Average height 10.5'.

North of East 233d Street, easterly side of driveway, dry rubble, 132 lin. ft. Average height 11'.

North of East 233d Street, east of driveway, adjacent to coal yard, dry and mortar rubble, 280.5 lin. ft. Average height 11.5'.

East side of driveway between East 234th and East 236th Streets, dry rubble, 185 lin. ft. Average height 5'.

West of driveway north of East 236th Street, rear of Macy's stable, mortar rubble, concrete foundation and backing, 76 lin. ft. Average height 9.5'.

North of Mt. Vernon Avenue, west side of river, one concrete bridge abutment 84' long, 14.7' high; and east side of river 20' added to old abutment, average height 10', 45' of concrete coping.

North of Mt. Vernon Avenue, east side of driveway, dry rubble, concrete foundation, 163 lin. ft. Average height 6'.



NEARLY FIVE MILES OF BILLBOARDS WERE BANISHED FROM THE RESERVATION

*Before*



North of Mount Vernon Avenue, opposite Springer Avenue, east side driveway, dry rubble, concrete foundation, 108 lin. ft. Average height 10'.

North of Broad Street Viaduct, west side driveway, mortar and rubble, concrete foundation 146 lin. ft. Average height 8'.

Near Fleetwood Avenue, west side river, rebuilt, 100 lin. ft., dry rubble. Average height 10'.

Retaining walls at Front Avenue Bridge extended, 118 lin. ft. concrete. Average height 13'.

South of Palmer Avenue, east side of access drive, mortar rubble, concrete foundation and backing, 116 lin. ft. Average height 8.5'.

South of Palmer Avenue, west side of driveway, mortar rubble, concrete foundation and backin , 238 lin. ft. Average height 8'.

North of Palmer Avenue, west side of driveway, mortar rubble, concrete foundation and backing, 148 lin. ft. Average height 7.5'.

North of Swain Street, west side of driveway, mortar rubble, concrete foundation and backing, 221 lin. ft. Average height 6'.

Between Harney Road and Ardsley Road, east side, west drive, 366 lin. ft. of concrete foundation only. Average depth 3'.

Between Scarsdale and Hartsdale, west side driveway, dry rubble, concrete foundation, 469 lin. ft. Average height 6.5'.

Between Scarsdale and Woodland Place, boulder walls, 700 lin. ft. various heights.

Under Hamilton Avenue, White Plains, east side driveway, concrete, 335 lin. ft. Average height 10'.



*After*



TREATMENT OF 42 INCH STORM WATER DRAIN CROSSING RESERVATION  
NEAR MCLEAN AVENUE



BEFORE IMPROVEMENT

Miscellaneous wall construction, mostly re-building or extending dry rubble walls, approximately 500 lin. ft., various heights.

Riprapping and boulder protection along river banks to prevent erosion. 11,932 lin. ft. Various heights.

*Drainage Structures*

Culverts under driveway as follows:—

Near Springer Avenue, reinforced concrete, 4' 3" by 2' 6", stone headwalls at each end.

South of Broad St. Viaduct, reinforced concrete with two openings each, 8' by 2' 8". Stone headwalls at each end.

North of Greenacres Avenue, Hartsdale, 42" cast iron pipe, concrete foundation, stone headwalls.

South of Woodland Place Viaduct, 4½' by 3' stone headwalls.

North of Cemetery Road, 24" concrete pipe, concrete foundation.

Drains and under-drains:

3,980 linear feet, 6 inch pipe  
7,050 linear feet, 8 inch pipe  
3,020 linear feet, 10 inch pipe  
2,050 linear feet, 12 inch pipe  
1,350 linear feet, 15 inch pipe  
1,035 linear feet, 18 inch pipe  
700 linear feet, 20 inch pipe  
600 linear feet, 24 inch pipe  
24 linear feet, 30 inch pipe  
254 linear feet, 36 inch pipe





DRAIN OUTLET AFTER IMPROVEMENT

Catch basins, inlets and manholes — 110.

Stone headwalls were built in river banks at outlets of most of these drains.

#### *Changes in Existing Sewers and Drains*

South of Gun Hill Road, 430 lin. ft. of 12" sanitary sewer and four manholes.

East 235th Street, 57" storm water drain carried under driveway by cast iron pipe and concrete structure with stone headwall. Stone paved channel between driveway and Bronx River.

McLean Avenue, 42" storm sewer, stone headwall and waterfall, stone faced channel between driveway and lake.

Hunt's Bridge Road, brook conduit partially removed, stone headwalls, stone paved channel.

At Sherwood Avenue Bridge, 61 lin. ft. of 12" sanitary sewer; 75 lin. ft. of storm water drain and one manhole.

At Swain Street Undercrossing, 415 lin. ft. of 36" storm water drain and stone headwall; 297 lin. ft. of 12" sanitary sewer and four manholes.

At White Plains, 20 lin. ft.; 24" reinforced concrete conduit for sanitary sewer; 209 lin. ft. of 10" sanitary sewer and three manholes.

Thirty-nine Bronx Valley Sewer manholes raised, lowered or sealed at crown of sewer.

#### *Dams*

Low dams to regulate river flow as follows:—

Loose stone dam in Bronx River opposite East 228th Street, New York City.

Stone dam near outlet of Hunt's Bridge Road Brook.

Regulating dam and footbridge over channel between old river and lake north of Mt. Vernon Avenue.





SWAIN'S MILL AT BRONXVILLE  
*Built about 1830*



MILL CONVERTED INTO OFFICE HEADQUARTERS



### *Guard Fence*

31,091 lin. ft. rustic, locust guard fence along driveway.

One hundred eighty-four lin. ft. of steel post and galvanized wire fence at Wakefield.

### *Buildings*

Old Swain's Mill, Bronxville, reconstructed into main office and Headquarters for all departments.

### PAVING

Your Commission fixed the width of the Parkway Drive at 40', except in a few locations where, in order to take advantage of topographical conditions, it is divided into two one-way drives. These widths provide ample room for two lines of traffic in each direction.

After thorough investigation, it was decided that the best type of pavement to meet traffic conditions on the Bronx River Parkway Drive would be a reasonably heavy concrete base with bituminous wearing surface. It was decided to use a concrete base with bituminous wearing surface instead of concrete throughout, because of the resiliency of bituminous wearing surface and the absence of joints in the pavement affording smoother riding conditions and with less maintenance. The darker bituminous surface also harmonizes better with the surroundings than concrete.



BRIDGE AT GREENACRES



The standard concrete base is 5" thick at the sides and 7" at center, with flush curbs on embankments and 3" curbs in cuts laid integral with the foundation. The finished pavement, which follows a parabolic curve in transverse section, has a crown of 5" in the width of 40'. This crown provides satisfactory lateral drainage, even on flat grades, and the bottom of the concrete base is formed by two straight lines from each side to the center of the roadway, which deviate from the horizontal by only 3" at the center. All types of bituminous wearing surface are 2½" thick. Among the bituminous wearing surfaces deemed suitable for the Parkway Drive are:

2" asphalt blocks on a ½" mortar bed with sanded joints.

Bituminous concrete, 2½" thick.

Bituminous concrete, Warrenite process, 2½" thick.

Bituminous concrete, Amiesite process, 2½" thick.

In letting contracts for paving, alternative bids on the above types of wearing surfaces are taken. A schedule has been prepared and adopted by the Commission which fixes the relative value of the various types of bituminous wearing surfaces, and the type of pavement is selected which will give the greatest value for the cost, as determined by the bids on the basis of this schedule. Under this policy the four types of pavement which have demonstrated their utility are in active competition.



LOOKING SOUTH TOWARD NEW YORK CITY LINE

*Before*



To date approximately 6 miles of pavement has been laid, of which about 3 miles is asphalt block and approximately 3 miles bituminous concrete. 63,436 square yards of asphalt block surface and 69,038 square yards of bituminous concrete surface have been laid, all on concrete base.

#### CONTRACTS

The following construction contracts were in progress during the years 1919-1922 inclusive covered by this report.

CONTRACT No. 14-A: Completing the construction of Broad Street Viaduct of six reinforced-concrete arched spans, across the Reservation between Mount Vernon and Yonkers. Five bids were received, September 3, 1920; contract was awarded to lowest bidder, Louis J. Sieling, New York City, and completed September 14, 1921. The cost of this viaduct was distributed among the Cities of Mount Vernon and Yonkers, the New York Central Railroad Company, State of New York and Bronx Parkway Commission. Viaduct construction was originally started under Contract No. 14, awarded to Crownbar Construction Company, Inc., which abandoned the work when 75 per cent completed, May 31, 1918. The work was carried to successful completion under Contract No. 14-A. Contract cost \$121,860.37.

CONTRACT No. 27: Grading Bronx River Parkway Drive and certain portions of Bronx River Parkway Reservation, between Gun Hill Road and



*After*





LOOKING NORTH FROM EAST 242ND STREET, NEW YORK CITY





SCARSDALE FALLS



East 233d Street, New York City. Nine bids were received, October 27, 1919; contract was awarded to Spadaro Contracting Company, Inc., New York City, lowest bidder, and completed April 30, 1921. Contract cost \$121,008.98.

This contract covered the grading required in carrying out an agreement with the City of New York, approved by the Board of Estimate and Apportionment, for grading a portion of the Parkway Drive within the lines of Bronx Boulevard. The work, including grading of adjacent portions of the Reservation included excavation and placing of about 44,700 cubic yards of earth and the furnishing and placing of about 116,200 cubic yards of filling material, principally cinders.

CONTRACT No. 29: For removal and disposal of gravel surfacing and placing a bituminous macadam surface pavement on a new street between Kensico Avenue and Columbus Avenue, Valhalla, N. Y. Three bids were received on April 21, 1919; contract was awarded to Garofano & Benedetto, Inc. of Mt. Vernon, N. Y., the lowest bidder. Work was completed July 31, 1919 at a contract cost of \$5,204.94.

CONTRACT No. 31: Construction of Bronx Parkway Drive Bridge No. 1 over Bronx River, south of Gun Hill Road and Bronx Parkway Drive Bridge No. 2 over Bronx River north of Gun Hill Road, Williamsbridge, New York City. Seven bids were received on October 20, 1919, but rejected to await more favorable conditions in labor and material markets. F. Gradwohl Engineering



SOUTH OF WOODLAWN, NEW YORK CITY  
*Before improvement, the Valley was periodically flooded*



and Contracting Company, Inc., of New York City, submitted the lowest of four bids, opened March 8, 1920, and was awarded contract. Work was completed July 31, 1922. Contract cost \$164,693.15. The portion of Parkway Drive over both bridges is divided by a central parking strip and open well through the arches. Bridge No. 1 is, in effect, a duplex structure of two arches, separated by a central concrete stairway on the driveway axis and leading down to a boat landing under the bridge.

CONTRACT No. 32: Excavating and grading material from spoil banks along westerly side of Bronx River, between Hamilton Avenue and car barns, White Plains, N. Y. Three bids were received May 19, 1919, and the contract awarded to Good Roads Engineering & Contracting Co., Inc., Port Chester, N. Y., lowest bidder. Work was completed August 5, 1919, at a contract cost of \$3,676.50.

CONTRACT No. 33: Paving of Bronx River Parkway Drive between Crane Road, Scarsdale, and Woodland Place, White Plains, N. Y.

Four bids were received on March 8, 1920, but rejected and new bids taken on May 17, 1920. Contract awarded to Hastings Pavement Company, New York, and completed December 27, 1920, at a contract cost of \$289,779.14. This work included concrete pavement base and asphalt block pavement on the Parkway Drive, 40 feet wide, for the greater portion and short stretches of 20 foot roadways through a portion of the Reservation where it was not possible



SAME AS PRECEDING VIEW — AFTER IMPROVEMENT. RIVER LOWERED AND CHANNEL ENLARGED





FORMER CONDITIONS SOUTH OF MAIN STREET, WHITE PLAINS

to construct a 40 foot drive without cutting large trees and destroying considerable areas of attractive, natural woodland. The contract also included necessary retaining walls.

CONTRACT No. 34: Bronx Parkway Drive Bridge No. 33, over Bronx River south of Woodland Place, White Plains, N. Y.

The lowest of three bids received May 17, 1920 was submitted by Faillace Brothers, New York, to whom the contract was awarded; work was completed May 31, 1921. Contract cost \$38,824.92. This bridge has a reinforced-concrete arch of 52 feet span with granite arch ring and rubble masonry facing. It spans the Bronx River and a foot-path along the bank.

CONTRACT No. 35: Grading access road at East 210th Street, Williamsbridge, New York City. O'Connell & Strada, to whom the contract was awarded submitted the lower of two bids received May 10, 1920. The work was completed September 25, 1920 at a contract cost of \$3,739.95. This grading was to connect the established city grade of Station Place with the Parkway Drive, (Bronx Boulevard).

CONTRACT No. 36: Moving Sherwood Avenue Bridge, Mount Vernon, N. Y. Of five bids received, December 6, 1920, the lowest was submitted by H. C. Damm of New York, to whom the contract was awarded. Work was completed February 4, 1921 at a contract cost of \$2,425. This bridge was moved westward about 50 feet to span the river channel as re-located, to provide a planting strip between the river and railroad embankment.

CONTRACT No. 38: Construction of Bronx Parkway Drive Bridge No. 34, known as Woodland Place Viaduct, White Plains. Twelve bids were received





SAME VIEW — RIVER MOVED AND DEEPENED

on March 25, 1921; the contract awarded to lowest bidder, J. F. Cogan Company, Contractors, New York. Work completed September 20, 1922, at a contract cost of \$168,806.60. This viaduct has four reinforced-concrete arch ribs of 145 feet span with a rise of 33 feet, and supporting the Parkway Drive roadway on spandrel columns, separated by spandrel arches. It spans the Bronx River and Harlem Division Railroad tracks and the cost was borne by the Bronx Parkway Commission, City of White Plains, New York Central Railroad Company and State of New York.

CONTRACT No. 39: Grading Bronx River Parkway Drive between East 233d Street and East 235th Street, New York City. Three bids were received August 2, 1920, the lowest being that of Joseph Spadaro, New York, to whom the contract was awarded. Work was completed December 1, 1920; contract cost \$4,082.40.

CONTRACT No. 40: Furnishing and delivering granite arch-ring and granite coping stones for Parkway Drive Bridge No. 32, Hartsdale. Lower of two bids received October 4, 1920 was submitted by Domenico Bianco, Tuckahoe, N. Y., to whom the contract was awarded. Work was completed June 18, 1921 at a contract cost of \$2,031.59.

CONTRACT No. 42: Granite stairway at south side of Gun Hill Road Bridge over Bronx Boulevard, Williamsbridge, New York City. Joseph Saso, Yonkers, N. Y., was awarded this contract on the lower of two bids received November 15, 1920. Work was completed September 21, 1921, at a contract cost of \$8,516.99.





FORMER CONDITIONS ALONG RIVER — MOUNT VERNON



RIVER RELOCATED AWAY FROM RAILROAD AND DEEPENED



CONTRACT No. 43: Paving of Bronx River Parkway Drive between Duncomb Street, Williamsbridge and East 233d Street, Woodlawn, New York City. Five bids were received April 4, 1921; contract awarded to lowest bidder, Asphalt Construction Company, New York. Work was completed September 15, 1922, at a contract cost of \$131,791.86. This contract covered bituminous concrete pavement on a concrete base for the section of Parkway Drive between above named limits.

CONTRACT No. 44: Paving of Bronx River Parkway Drive between East 233d Street, Woodlawn, New York City, and Yonkers Avenue, Mt. Vernon. Six bids were received April 4, 1921, the lowest being that of Asphalt Construction Company, New York, to whom the contract was awarded. Work was completed September 19, 1921, at a contract cost of \$127,918.35.

CONTRACT No. 46: Granite arch-ring and granite coping stones for Parkway Drive Bridge No. 14, Palmer Avenue, Yonkers, N. Y. Four bids were received July 17, 1922, the lowest being submitted by Pasquale Maresca, New York, to whom the contract was awarded. Work was completed October 15, 1922 at a contract cost of \$3,371.

CONTRACT No. 47: Completing of filling of Bronx River Parkway Drive between Yonkers Avenue, Mount Vernon and Front Avenue Bridge, Bronxville. Bids were received September 26, 1921; contract awarded to Joseph Spadaro, New York, lowest bidder. Contract completed October 26, 1922; contract cost \$10,992.20.

CONTRACT No. 48: Granite arch-ring and coping stones for Parkway Drive Bridge No. 15 Swain Street, Yonkers, N. Y. Contract was awarded to Pasquale Maresca, New York, who submitted the lowest of three bids on May 22, 1922. Work was completed October 15, 1922; contract cost \$5,091.40.

CONTRACT No. 51: Construction of Parkway Drive Bridges No. 17 and No. 18 over Bronx River, north of Tuckahoe Road, Tuckahoe, N. Y. Thirteen bids were received September 19, 1921, the lowest being that of Joseph Saso, Yonkers, to whom contract was awarded. Work was about 95 per cent. complete at the end of 1922, and progress payments amounted to \$23,934.68. Bridge 17 is a wooden beam and rubble faced reinforced-concrete beam and slab bridge of 45' span and Bridge 18 is a rubble faced reinforced-concrete beam and slab bridge of 40' span, with granite arch ring.

CONTRACT No. 52: Construction of Parkway Drive Bridges Nos. 22, 23 and 24 over Bronx River between Crestwood and Scarsdale. Ten bids were received on May 23, 1921, and contract awarded to lowest bidder, Garofano Construction Co. of Mt. Vernon, N. Y. Contract completed May 25, 1922; contract cost \$42,662.88. Bridges 22 and 23 are reinforced-concrete, beam and slab bridges with wooden beam and rubble facing, (both) of 35' span. Bridge 24 is a reinforced-concrete beam and slab bridge with granite arch ring and rubble facing of 35' span.

CONTRACT No. 55: Concrete base for pavement to be laid under Contract 55-A. Contract awarded to lowest bidder, Petrillo Brothers, Mt. Vernon, on bids received October 10, 1921. Work completed November 30, 1921; contract cost \$9,364.35.





CAT TAILS AND BILLBOARDS NEAR WAKEFIELD CAR BARN



SAME VIEW — AFTER IMPROVEMENT





DEBRIS FROM SLIMY RIVER BOTTOM — HUNDREDS OF WAGON LOADS REMOVED

CONTRACT No. 55-A: Parkway Drive paving over Bridges No. 32 and No. 33 between Hartsdale and White Plains. Contract awarded to lowest bidder. Hastings Pavement Company, New York, on bids received October 10, 1921. Work completed December 15, 1921; contract cost \$10,750.41.

CONTRACT No. 58: Granite arch-ring and coping stones for Parkway Drive Bridge 9-B north of Mount Vernon Station. Contract awarded to lowest bidder, Marco Castignoli, Yonkers, N. Y., on bids received June 20, 1921. Work completed August 15, 1921; contract cost \$1,111.32.

CONTRACT No. 59: Granite arch-ring and coping stones for Parkway Drive Bridge No. 13, north of DeWitt Avenue, Bronxville, N. Y. Contract awarded to lowest bidder, Domenico Bianco, Tuckahoe, N. Y., on bids received August 22, 1921. Work completed April 17, 1922; contract cost \$2,123.12.

CONTRACT No. 61: Furnishing, delivering and setting granite and rubble masonry for Parkway Drive Bridge No. 2 over Bronx River north of Gun Hill Road, Williamsbridge, New York City. Bids received October 25, 1921, and contract awarded to lowest bidder, Joseph Saso, Yonkers, N. Y. Work completed July 1, 1922; contract cost \$10,648.45.

CONTRACT No. 62: Furnishing, delivering and setting granite and rubble masonry for Parkway Drive Bridge No. 1 over Bronx River south of Gun Hill Road, Williamsbridge, New York City. Bids received December 6, 1921 and contract awarded to lowest bidder, Justin R. Clary, White Plains, N. Y. Work completed May 17, 1922; contract cost \$13,446.29.



CONTRACT No. 68: Grading approaches to Parkway Drive Bridge No. 2 north of Gun Hill Road, Williamsbridge, New York City. Contract awarded to lowest bidder, Casper Helbock Company, Inc., New York, on bids received April 17, 1922. Work completed May 26, 1922; contract cost \$2,768.48.

#### FORESTRY AND MAINTENANCE

Forestry and maintenance work has been continued as in previous years with trained forestry assistants caring for the thousands of trees in the Reservation and applying treatments necessary to combat diseases and insect pests. Other work in this department includes the clearing up of brush and litter and cutting of weeds where they interfere with public use of the Reservation.

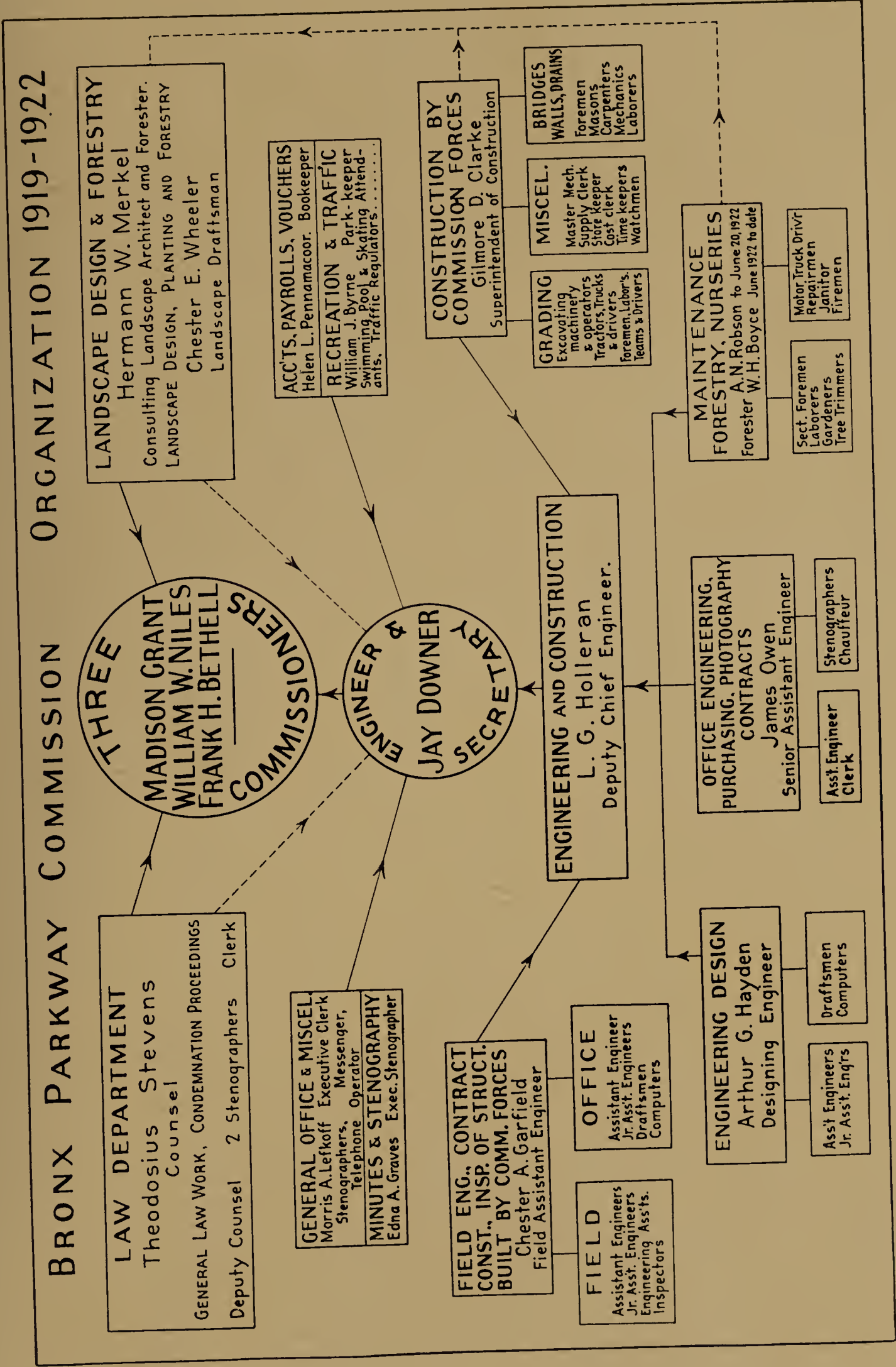
Recreational features of the Parkway have continued to increase in popularity, especially bathing and swimming at the various pools maintained in The Bronx and Westchester County. The completion of lakes at Wakefield, Mount Vernon, Bronxville, Crestwood, Scarsdale and White Plains provide greatly increased surfaces which attract and comfortably accomodate many thousands of skaters.

I submit with this report a roster of the Commission's engineering, construction and office staffs, also a chart showing graphically the organization of the Commission's forces.

Respectfully submitted,

JAY DOWNER,  
*Engineer and Secretary*







## OFFICERS AND EMPLOYEES

### AS OF DECEMBER 31, 1922, EXCLUSIVE OF PER DIEM EMPLOYEES

Name	Title	Entered service
Madison Grant.....	Commissioner and President....	July 25, 1907
William White Niles.....	Commissioner and Vice-President	July 25, 1907
Frank H. Bethell.....	Commissioner and Treasurer....	Jan. 26, 1917
Jay Downer.....	Engineer and Secretary.....	July 17, 1911
Theodosius Stevens.....	Counsel.....	June 1, 1914

#### GENERAL OFFICE

Morris A. Lefkoff.....	Clerk.....	Oct. 1, 1912
Helen L. Pennamacoor.....	Bookkeeper.....	July 1, 1914
William J. Byrne.....	Parkkeeper.....	Nov. 5, 1914
Gertrude F. C. Nestor.....	Stenographer.....	June 15, 1915
May T. McKeon.....	Stenographer.....	Sept. 17, 1917
Marie K. Raven.....	Telephone Operator.....	July 1, 1920
Isabel G. Nestor.....	Telephone Operator.....	July 1, 1921
Edna A. Graves.....	Stenographer.....	April 25, 1921
Clarence E. Pitts.....	Deputy Counsel.....	Oct. 1, 1921

#### ENGINEERING DEPARTMENT

L. G. Holleran.....	Deputy Chief Engineer.....	April 24, 1914
Chester A. Garfield.....	Field Assistant Engineer.....	Nov. 15, 1912
James Owen.....	Sr. Assistant Engineer.....	Oct. 13, 1914
Arthur G. Hayden.....	Sr. Assistant Engineer.....	Oct. 1, 1919
John Locke.....	Assistant Engineer.....	May 4, 1915
W. Frederick Welsch*.....	Assistant Engineer.....	July 1, 1920
Dudley P. Babcock.....	Assistant Engineer.....	Sept. 8, 1920
Thomas L. Sullivan.....	Assistant Engineer.....	April 11, 1916
Arthur Ehlers.....	Assistant Engineer.....	July 24, 1916
David E. Van Buren.....	Assistant Engineer.....	April 12, 1916
Christian Kopp.....	Assistant Engineer.....	Feb. 1, 1920
John J. Carroll.....	Assistant Engineer.....	Mar. 1, 1920
Emilie Surdez.....	Stenographer.....	June 23, 1916
Mary A. Havens.....	Stenographer.....	Oct. 6, 1919

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\* On leave of absence.



#### LANDSCAPE DESIGN

Name	Title	Entered service
Chester E. Wheeler.....	Landscape Draftsman.....	Sept. 1, 1915
H. Clyde Roe.....	Landscape Draftsman.....	Sept. 1, 1917

#### CONSTRUCTION DEPARTMENT

Gilmore D. Clarke.....	Superintendent of Construction..	June 28, 1916
Lee R. Stuffer.....	Master Mechanic.....	Oct. 8, 1919
Louis A. M. Bushnell.....	General Foreman.....	Mar. 21, 1921
E. J. Pickwick.....	General Foreman.....	Mar. 31, 1921
Eugene Strang.....	General Foreman.....	Oct. 1, 1917
Arthur Webb.....	General Foreman.....	Aug. 14, 1917
James McLaughlin.....	Dragline Operator.....	July 16, 1917
William McLaughlin.....	Dragline Operator.....	Dec. 20, 1919
Allen P. Millen.....	Dragline Operator.....	July 19, 1920
George W. Morris.....	Steam Shovel Operator.....	May 26, 1920
Frederick Soldwedell.....	Steam Shovel Operator.....	June 21, 1920

#### MAINTENANCE AND FORESTRY

Walter H. Boyce.....	Forester (since June 1922).....	Oct. 1, 1919
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LIST OF FORMER EMPLOYEES WHO HAVE LEFT THE COMMISSION'S  
SERVICE SINCE JANUARY 1, 1919

Name	Title	Entered Service	Separated From Service
Hazel C. Bagley.....	Telephone Operator.....	Mar. 18, 1918	June 30, 1921
Louise A. Bancroft.....	Executive Stenographer.	Jan. 1, 1913	April 12, 1919
Seymour F. Barnett.....	Jr. Asst. Engineer.....	Sept. 9, 1920	Oct. 1, 1921
Carlton E. Bausch.....	Jr. Asst. Engineer.....	June 14, 1920	July 30, 1922
Samuel L. Becker.....	Engineering Assistant...	Nov. 16, 1921	Dec. 31, 1922
Morgan J. Brennan.....	Assistant Engineer.....	June 29, 1914	Aug. 15, 1922
Gladys M. Cherry.....	Stenographer.....	Jan. 6, 1915	Sept. 8, 1919
John E. Curtin.....	Assistant Engineer.....	Dec. 1, 1916	April 15, 1920
Robert C. Durland.....	Assistant Counsel.....	Mar. 13, 1916*	Aug. 5, 1921
William O. Gantz.....	Deputy Counsel.....	April 1, 1916†	Jan. 1, 1920
Barbara G. Gosch.....	Stenographer.....	Nov. 1, 1915	Sept. 30, 1919
Francis H. Griswold....	Engineering Assistant...	May 2, 1921	Sept. 7, 1921
Edward J. Groark.....	Clerk.....	June 5, 1916*	Dec. 31, 1921
Frederick H. Gross.....	Assistant Engineer.....	Nov. 18, 1912	Aug. 17, 1922
Elmer R. Hauck.....	Jr. Asst. Engineer.....	April 16, 1917	Dec. 31, 1922
Joseph F. Holder.....	Engineering Assistant...	June 16, 1917	Nov. 30, 1919
George Hon.....	Dragline Operator.....	Nov. 2, 1921	Oct. 20, 1922
Morris S. Jaffe.....	Jr. Asst. Engineer.....	Sept. 23, 1920	Dec. 31, 1922
James E. Keaveney.....	Engineering Assistant...	Feb. 7, 1921	Dec. 31, 1922
Frederick T. Lawton....	Assistant Engineer.....	April 10, 1922	Aug. 15, 1922
Harold Mattison.....	Engineering Assistant...	Feb. 14, 1921	Nov. 30, 1922
Irving H. McFalls.....	Jr. Asst. Engineer.....	May 8, 1916	Feb. 15, 1920
John L. McGinnity.....	Engineering Assistant...	Feb. 1, 1917	Mar. 5, 1920
Harold A. Mills.....	Engineering Assistant...	Jan. 2, 1922	June 1, 1922
William E. Moore.....	Clerk.....	Sept. 1, 1914	Aug. 31, 1919
Sidney W. Mosher.....	Jr. Asst. Engineer.....	Mar. 10, 1922	June 30, 1922
Charles H. Peck.....	Deputy Counsel.....	Aug. 1, 1918	Jan. 31, 1921
Angela Purcell.....	Telephone Operator.....	July 1, 1919	June 30, 1920
Raymond J. Reddy.....	Assistant Engineer.....	Aug. 16, 1920	June 30, 1922
Albert N. Robson.....	Forester.....	Jan. 1, 1913	June 20, 1922
Isidore Rubin.....	Jr. Asst. Engineer.....	July 1, 1921	July 30, 1921
Warren F. Rugg.....	Assistant Engineer.....	Aug. 1, 1917	Oct. 15, 1922
Charles Schuman.....	Engineering Assistant...	May 10, 1920	Oct. 15, 1921
Ernest N. Stevens.....	Jr. Asst. Engineer.....	April 1, 1921	Dec. 31, 1922
Robert F. Sweet.....	Steam Shovel Operator..	July 7, 1921	Dec. 10, 1922
Theodore E. Tatro.....	Engineering Assistant...	April 27, 1921	Nov. 15, 1922
John J. Tobin.....	Inspector of Masonry...	May 20, 1920	July 15, 1922
Thomas J. Torpy.....	Jr. Asst. Engineer.....	April 1, 1920	July 3, 1920
Elizabeth Van Vranken.	Stenographer.....	Oct. 26, 1919	Nov. 30, 1920
Emanuel Willing.....	Jr. Asst. Engineer.....	April 15, 1920	June 15, 1922
David Wright.....	Entry Clerk.....	Oct. 20, 1915‡	Nov. 30, 1921

\* Deceased.

† On per diem basis.

‡ Retired.





PARKWAY DRIVE AT SCARSDALE





TABLET RECORDING A GIFT OF FOREST LANDS AT FOX MEADOW, SCARSDALE,  
BY MISS EMILY O. BUTLER



## INSCRIPTION ON BUTLER TABLET

THIS FOREST IS THE GIFT OF EMILY O. BUTLER TO THE BRONX PARKWAY COMMISSION FOR THE PEOPLE OF THE STATE OF NEW YORK. PART OF A TRACT OF FIVE HUNDRED ACRES BELONGING TO EMILY O. BUTLER UNITED IN ONE OWNERSHIP BY HER FATHER CHARLES BUTLER KNOWN AS THE "FOX MEADOW" ESTATE AND THE BIRTHPLACE OF GOVERNOR DANIEL D. TOMPKINS IN 1913 MISS BUTLER DONATED TWENTY-FIVE ACRES TO THE PARKWAY COMMISSION. THIS GIFT WAS OF MATERIAL AID IN OBTAINING PUBLIC SUPPORT FOR THE PARKWAY. IN 1918 MISS BUTLER GAVE MORE THAN SEVEN ADDITIONAL ACRES INCLUDING THE FOREST AND TWO BROOKS IN ORDER TO PRESERVE THEM IN THEIR NATIVE BEAUTY FOR FUTURE GENERATIONS.



## REPORT OF THE COUNSEL

*December 31, 1922.*

*To the President and Members of the Bronx Parkway Commission of the State of New York,*

342 Madison Avenue,  
New York City.

Dear Sirs.— I have the honor to transmit to you the following as the report of the Law Department of your Commission for the years 1919 to 1922 inclusive, complete except for fiscal statistics which obviously could not be compiled until after the close of the current calendar year.

The scope of the department falls in two classes; law work involved by the acquisition of land, including condemnation proceedings, and the general law work.

In the preceding reports for this department, accompanying your general reports of 1916, 1917 and 1918, the acquisition of land in the parkway area was described with particularity, that is, the methods employed in the purchase of the land, and in the conduct of the condemnation proceedings on the parcels which could not be acquired by direct purchase, and while no useful purpose would be served by the repetition of the detail contained in the previous reports, a few words in the nature of recapitulation may be in order.

Two-thirds of the reservation by value, and also about two-thirds in the number of parcels was acquired by direct purchase from the owners after negotiation, leaving the balance of one-third only as the subject for condemnation proceedings.

Since 1918, to wit, on July 8, 1921, the Board of Estimate and Apportionment approved, (on the recommendation of the Commission, made in order to avoid the construction of two expensive railroad under-crossings and other bridges for the parkway drive) the acquisition of a tract of land in the City of Yonkers, south of Bronxville, which although included in the reservation had not been previously approved for acquisition. This added some 13 parcels to the previous total, excluding street lands.

The greatest activity in the acquisition of lands by purchase immediately followed the final approval of the project by the Board of Estimate on June 5, 1913. By the close of 1915 almost all of the parcels which could be acquired at prices considered reasonable and which before closing had been submitted to the city and county authorities as to fairness in price) had been acquired, and in December 1915 the first general condemnation proceeding was instituted which covered 54 parcels. This was followed by the rapid institution in 1916 of other general proceedings, and as appears from the report of December 31, 1918, 439 of the probable total of 455 parcels were then the subject of condemnation, and at that time many of the awards not only had been made by the commissioners of appraisal appointed by the court, but had been paid as well from appropriations made by New York City and Westchester County for that purpose.



The following tabulation shows the total number of parcels in the reservation with respect to their acquisition by the Commission:

Total number of parcels.....	1,330
I. <i>Acquired</i> — 1,291 parcels	
(a) Purchased and paid for, or donated.....	848
(b) Condemned, and appropriations to pay awards been made....	365
(c) Condemned, but where proceedings still pending and appropriations for awards not yet made.....	78
II. <i>In Process of Acquisition</i> — 10 parcels	
(a) Under agreement to purchase.....	7
(b) Condemnation proceedings pending, but title not yet vested through judgment of condemnation.....	3
III. <i>Unacquired</i> — 29 parcels	
(a) Owned by the City of New York or Westchester County....	28
(b) Not acquired on account of disproportionate consequential damage.....	1
	<hr/>
Total.....	1,330
	<hr/> <hr/>



WINTER DISCLOSES THE CHARM OF CURVING SHORE LINES



### *Cost of Acquisition of Lands*

From the above, it is shown that title to substantially all the required land in the reservation is now in the Commission; two-thirds in area acquired by donation and direct purchase, and substantially the remaining one-third by condemnation.

It will be noted that the condemnation proceedings on by far the greater number of parcels have been brought to conclusion, the necessary appropriations for which have been made by the City of New York and the County of Westchester, and the awards paid. There are some proceedings to determine the amount of the awards which have not yet been brought to a conclusion, most of them because of the elaborateness with which the damage claims were presented or are being presented before the commissioners of appraisal by the former owners of the property.

Professional real estate appraisers as well as engineers of different sorts — mechanical, civil, electrical — also landscape architects and foresters have been retained by the property owners, as experts to prove their contentions of the value of the land involved; and where that has been done, this department, in order to meet and refute such claims, has been obliged also to rely upon expert testimony, at least to a certain extent. Some idea of what this amounts to may be given by citing, that in one proceeding the record of the claimants' direct case alone has filled 7,060 typewritten pages of minutes before commissioners of appraisal.

A few proceedings have been delayed somewhat on account of technical questions of title. The awards made in three important proceedings have on the application of the Commission been set aside as not made upon the proper basis, and the new trials thus secured before other commissioners of appraisal are in progress. Appeals have been taken whenever they seemed justified. In one case where the award made by the commissioners of appraisal was a large one, and, in the belief of the Commission, not justified, and based upon evidence which appeared to it contrary to the rule established by the court, the case was taken to the Court of Appeals, which however decided adversely to the Commission's contention and sustained the award.

There are twelve proceedings now pending, in eleven of which claims of damage advanced by the property owners amount to considerable sums, and where there is a very wide divergence of opinion as to value between the real estate experts employed by the Commission and those employed by the property owners. These proceedings have reached various stages of progress. In five proceedings the awards have been made by the commissioners of appraisal but not yet been finally acted upon by the courts. In six others testimony is still being submitted to the commissioners of appraisal, and in one proceeding commissioners of appraisal have not yet been appointed.

Under these circumstances, it is impossible to forecast with any degree of accuracy the amount of the awards for which appropriations will still have to be made. In all reasonable likelihood most of these unfinished proceedings will be brought to completion during the year 1923. There will doubtless be appeals from a few of the awards, which will retard final disposition in these instances. As to the amounts of the awards, the Commission, as above indicated, is in the position of a litigant, and all that this department can do is to continue contesting with vigor all claims it considers unjust, and present the disputed facts to the courts, with which the decision lies.



### *The Cost of Acquisition to Date*

#### *I. Acquired by Purchase:*

(a) Cost for lands purchased to December 31, 1918.....	\$4,125,448 00	
(b) Cost for lands purchased since December 31, 1918 (127 parcels) for which appropriations have been made.....	404,427 42	
	<hr/>	\$4,529,875 42

#### *II. Acquired by condemnation, for which appropriations have been made:*

(a) Cost of lands acquired by condemnation on proceedings which had been completed, and for which appropriations had been made up to December 31, 1918, including interest and costs allowed to claimants.....	\$2,365,012 93	
(b) Cost of lands acquired by condemnation, proceedings for which had been completed, and for which appropriations had been made, from January 1st, 1919, to December 31, 1922, including interest and costs allowed to claimants, but without other expenses of acquisition.....	481,653 86	
	<hr/>	2,846,666 79
Total.....		<hr/> <hr/> \$7,376,542 21

The cost per parcel for land purchased is but a fraction of the cost per parcel for land condemned. This is so, for in the latter case not only does the expense of the trial itself, that is the compensation to commissioners of appraisal and the stenographic minutes fall upon the condemning party, but the expense for expert testimony, trial counsel and miscellaneous items amounts to no small sum. In the 1918 report the average cost of each parcel which was purchased, including the expense of acquisition was \$5,958.32, as against \$8,446.47 for the average cost of each parcel condemned, including the expense of acquisition.

The average expense of acquisition per parcel for the parcels purchased amounted to \$93.17 against the average cost of the expense of acquisition per parcel condemned of \$821.87.

As the end of proceedings for the acquisition of land can now be said to be practically in sight, statistics on cost will be more useful if deferred until the final figures can be ascertained and used.

### GENERAL WORK

Since 1918 it has been possible owing to the diminishing amount in the volume of work to decrease the office staff, and, if possible, further reductions will be made during the coming year. The law work of a general nature, excluding



land acquisition, has embraced advice upon, and in some instances, defense and prosecution of miscellaneous litigations; examination and report upon claims; the approval as to form of contracts and agreements, including 15 contracts for construction work upon the reservation, and 12 agreements, easements and permits to municipalities, etc., for various purposes contemplated in and authorized by the Parkway Law.

In the early part of 1922 an amendment to the law was drafted, and subsequently adopted by the Legislature, to permit, with the approval of the Board of Estimate, two additional strips of land to be added to the parkway area; to provide more adequately for the control of the reservation, and to clarify the law with respect to the fund from which maintenance expense was to be drawn. Passed as Chapter 604, Laws of 1922.

Opinions were from time to time called for and rendered upon miscellaneous subjects. As all these matters are referred to with more or less particularity in the regular reports of the department submitted at the stated meetings of the Commission, further detailed comment upon them here does not seem necessary. The reports in question are numbered from 157 to 320, and cover the four year period of this report.

The most important litigations undertaken by the department during the last year are two proceedings instituted in the First Judicial District on behalf of the Commission against the members of the Board of Estimate and Apportionment of the City of New York for mandamus orders; the first to compel the appropriation of the City's three-fourths share of the amount requisitioned by the Commission for construction work for 1922, in amount \$801,000; the second to secure the City's three-fourths share of the maintenance expense of the Commission for the year 1923 by inclusion in the budget, the amount being \$138,000. Both proceedings were commenced simultaneously on October 13th, 1922. The defendants appeared, and after several adjournments at their instance were had, interposed answers substantially the same in each proceeding, in which the constitutionality of the Parkway Law was attacked, and in which the claim was made that the original approval of the Board of Estimate and Apportionment of the City of New York, given in 1912, and again in 1913, was given under misapprehension of fact. Full argument was had at the Special Term in November, 1922, and several briefs submitted by both sides.

On December 23rd the Court's opinion was published in the New York Law Journal. The opinion sustained the constitutionality of the Parkway Law upon the points upon which it was attacked. The formal order directing the appropriations to be made was filed in each proceeding a few days later; to wit, on December 29, 1922.

Respectfully submitted,

THEODOSIUS STEVENS,  
*Counsel.*





VARIED RECREATION IN PARKWAY RESERVATION



ACQUISITION OF LAND BY DIRECT PURCHASE AS OF DECEMBER 31, 1922

Deed No.	Sheet	Parcel	Grantor	Area square feet	Land	Buildings	Interest	Taxes	Assessments	Special	Total cost
Total as per Commission's report December 31, 1918, to deed No. 539.....				18,378,069	\$2,970,645 97	\$900,140 65	\$93,847 85	\$14,381 84	\$82,766 05	\$63,665 64	\$4,125,448 00
540	8	25	Wm. & Theodore De Witt.	107,104	8,360 00						8,360 00
541	21	8	Scarsdale Estates.....	196,020	36,649 00						53,344 08
542	30	12, 13, 14, 16, 17, 20	Bronx Valley Water Co....		6,900 00	7,267 00				8,333 00	22,500 00
543	100 parcels.		New York Central R. R....	3,451,319	259,857 08		2,392 10				262,249 18
544	9	46	City of Mt. Vernon.....	47,960	4,794 00						4,794 00
545	9A	5	Emil Gnehn.....	4,750	5,000 00		81 67				5,081 67
546	9A	12	Emily Walpole.....	2,839	1,000 00	8,855 00	22 68				9,877 68
547	9A	4	Bridget O'Malley.....	4,800	1,600 00		3 68				1,603 68
548	9A	1	Graman Building Co.....	44,895	13,500 00		31 06				13,531 06
549	9A	2, 11, 13	Graman Building Co.....	76,846	22,161 00		51 05				22,212 05
Taxes and assessments paid subsequent to December 31, 1918, on parcels listed in prior reports.....								565 56	308 46		874 02
Total land to which title has been taken by direct purchase as of December 31, 1922.....				*22,383,594	\$3,330,467 05	\$930,553 65	\$98,221 91	\$15,559 66	\$83,074 51	\$71,998 64	\$4,529,875 42

\* Excluding donations and street lands.





BOY SCOUT ENCAMPMENT, BRONXVILLE

This report goes to press on December 20th, too early to include the usual financial statements for the year ending December 31st. These will be submitted to the Legislature for printing as a supplement to the foregoing edition, which otherwise would not be available at the beginning of the legislative session.





*"The Bronx . . . all willows and lush grasses with big dock weeds flaunting their green flags, thousands of buttercups and daisies, . . . It's as full of birds and butterflies as England along the Thames or one of those ducky little streams out of Paris.*

F. HOPKINSON SMITH.

THE ILLUSTRATIONS  
IN THIS REPORT ARE FROM  
THE COMMISSION'S RECORD PHOTOGRAPHS  
TAKEN BY  
JAMES OWEN



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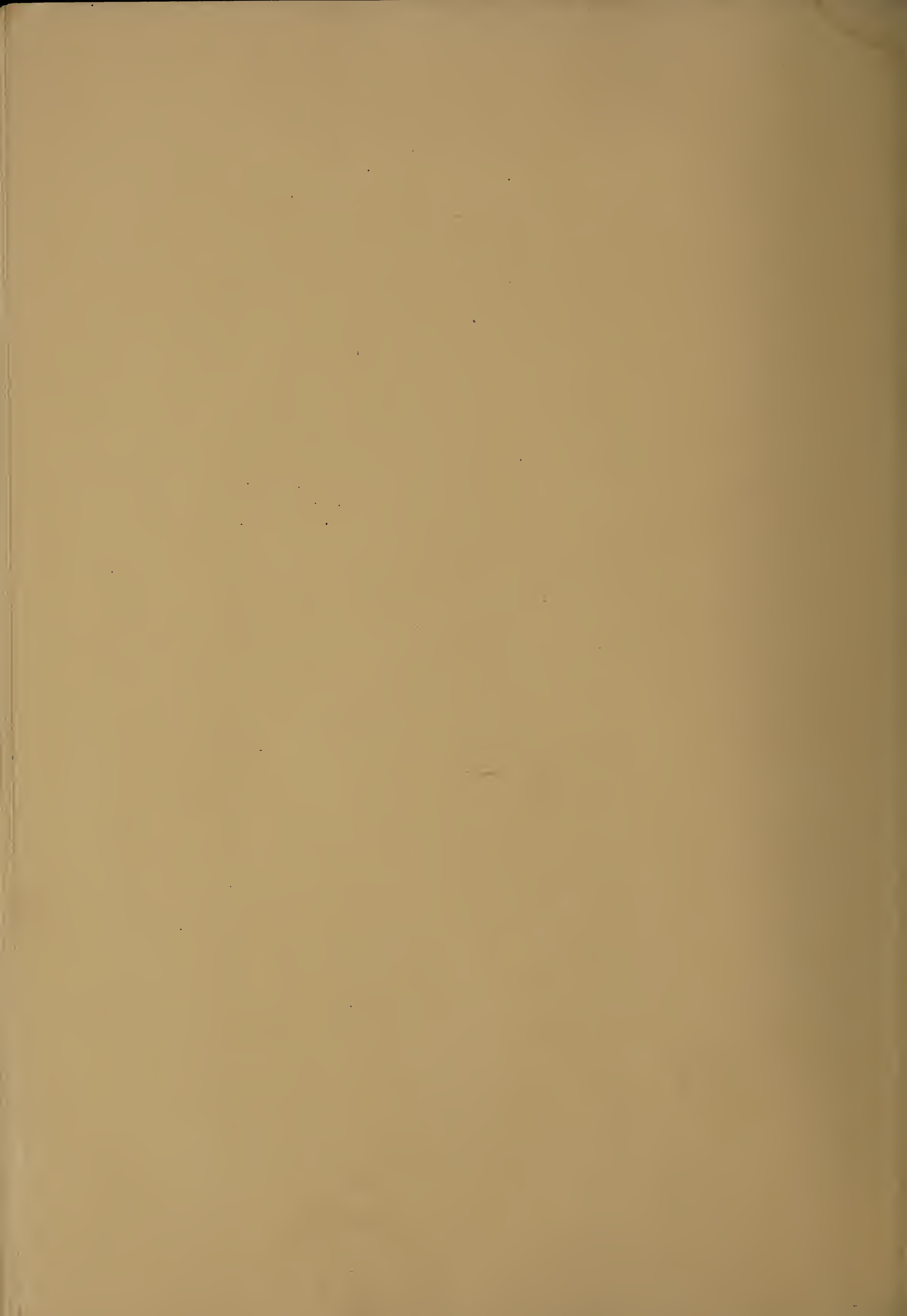


















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N.Y.(state). Bronx park-

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